

# Test Specifications Fuel Injection Pumps ①A and Governors

40

VDT-WPP 001/4 KHD 1 c

3. Edition

En

|               |           |               |                                       |                  |
|---------------|-----------|---------------|---------------------------------------|------------------|
| PES 2 A 80    | C/D 310/3 | RS 1322       | EP/RSV 425-1500 A8B/C501D,704D        | supersedes 5.74  |
| PES 3 A 75/80 | C/D 410/3 | RS 1183       | 325-1400 A8B/C272D,495D,540D,742D     | company KHD      |
|               |           | RS 1185       | 2011D,578D,1022D                      | engine F.. L 912 |
|               |           | RS 1320       | 325-1250A8B/C2085L                    | BF 6 L 912       |
| PES 3 A 75/80 | C/D 410/3 | RS 1324       | 325-1150A8B/C275D,298D,491D,492D,493D | F..L 912 W       |
| PES 4 A 75/80 | C/D 410/3 | RS 1183       | (1075)494D,540D,578D,601D,604D        |                  |
|               | C/D       | RS 1255       | 657D,705D,715D,694D                   |                  |
| PES 4 A 80    | C/D 410/3 | RS 1300       | 375-1150A8B/C590D                     |                  |
| PES 4 A 80    | C/D 410/3 | RS 2346(2523) | 325-1050A8B/C532D,577D                |                  |
| PES 5 A 80    | C/D 410/3 | RS 2327       | 325-1000A8B/C588D,598D,1032D,733D     |                  |
|               |           | RS 2347(2526) | 375-1000A8B/C606D,                    |                  |
| PES 5 A 80    | C/D 410/3 | RS 2555       | 325- 900A7B/C494D,602D,634D,2011D     |                  |
| PES 6 A 75    | C/D 410/3 | RS 1197       | 325- 750A7B/C633D,                    |                  |
| PES 6 A 75    | C/D 410/3 | RS 1326       | EP/RS 275/1400A0B/C496D,              |                  |
| PES 6A 80/85  | C/D 410/3 | RS 2273       | 325/1400A0B/C620D,                    |                  |
|               |           | RS 2348       | 325/1650A0B/C2087L,                   |                  |
|               |           | RS 2527       | RQV 275-1400AB 757D,799D              |                  |
|               |           |               | RQ 275/1400AB 694D,798D               |                  |

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 1,9 + 0,1

mm (from BDC)

For all plunger-and-barrel  
assembly diameters!

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>"C" 7,5<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>"D" 7,5<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|---|---|-------------------------------|---|--|
| 1000                             | 12                            | 6,2-6,6   | 0,4   | 12                            | 5,2-5,6   |  |
|                                  | 9                             | 3,0-3,7   |   | 9                             | 2,7-3,5   |  |
| 200                              | 15                            | 8,5-9,5   |   | -                             | -   |  |
|                                  | 9                             | 1,9-2,8   |   | 9                             | 0,7-1,4   |  |

Adjust the fuel delivery from each outlet according to the values in

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>"C" 8<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>"D" 8<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|---|---|-------------------------------|---|--|
| 1000                             | 9                             | 4,1-4,5   | 0,4   | 9                             | 3,1-3,5   |  |
|                                  | 6                             | 1,2-2,0   |   | 6                             | 0,1-0,6   |  |
| 200                              | 15                            | 10,3-11,4   |   | -                             | -   |  |
|                                  | 9                             | 2,9-3,7   |   | 9                             | 0,6-1,3   |  |

Adjust the fuel delivery from each outlet according to the values in

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>"C" 8,5<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>"D" 8,5<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|---|---|-------------------------------|---|--|
| 1000                             | 9                             | 5,0-5,5   | 0,4   | 9                             | 4,1-4,5   |  |
|                                  | 6                             | 1,3-2,1   |   | 6                             | 0,6-1,4   |  |
| 200                              | 15                            | 12,1-13,2   |   | -                             | -   |  |
|                                  | 6                             | 0,1-0,9   |   | 9                             | 1,4-2,2   |  |

Adjust the fuel delivery from each outlet according to the values in

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En

A1

2-cyl.:

3-cyl.: 1 - 3 - 2  
0 - 120-240

4-cyl.: 1 - 3 - 4 - 2  
0 - 90-180-270

5-cyl.: 1 - 3 - 5 - 4 - 2  
72-144-216-288-360

6-cyl.: 1 - 5 - 3 - 6 - 2 - 4  
0- 60 -120-180-240-300

**B. Governor Settings** - page 3 - 13, Instructions page 11

**C. Settings for Fuel Injection Pump with Fitted Governor**

F .. L 912 - page 13 - 20

BF 6 L 912 - page 21

F .. L 912 W - page 22 - 25

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| Upper rated speed                     |         |                       | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Sliding sleeve travel         |    |
|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-------------------------------|----|
| Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Torque-control travel rev/min | mm |
| 1                                     | 2       | 3                     | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                            | 11 |

425 - 1500 A 5 B 501 DL, 704 DL

|        |      |            |  |  |  |        |         |         |      |           |
|--------|------|------------|--|--|--|--------|---------|---------|------|-----------|
| loose  | 800  | 0,3-1,0    |  |  |  | ca. 26 | 425     | 5,5     | 1500 | 9,5-9,6   |
|        | X    | = 3,75     |  |  |  |        | 100     | min. 19 | 1000 | 9,9-10,2  |
| ca. 68 | 1540 | 1550 = 8,5 |  |  |  |        | 425     | 5,9-6,1 | 600  | 10,5-10,6 |
|        | 1575 | 1605 = 4,0 |  |  |  |        | 610-670 | = 2,0   |      |           |
|        | 1750 | = 0,3-1,7  |  |  |  |        |         |         |      |           |

325 - 1400 A 8 B 495 DL, 272

|        |      |            |  |  |  |        |         |         |      |           |
|--------|------|------------|--|--|--|--------|---------|---------|------|-----------|
| loose  | 800  | 0,3-1,0    |  |  |  | ca. 20 | 325     | 5,0     | 1400 | 10,2-10,3 |
|        | X    | = 4,5      |  |  |  |        | 100     | min. 19 | 850  | 10,9-11,1 |
| ca. 67 | 1440 | 1450 = 9,2 |  |  |  |        | 325     | 5,4-5,6 | 500  | 11,5-11,6 |
|        | 1470 | 1500 = 4,0 |  |  |  |        | 500-560 | = 2,0   |      |           |
|        | 1600 | = 0,3-1,7  |  |  |  |        |         |         |      |           |

325 - 1400 A 8 B 540 DL, 578 DL, 1022 DL

|        |      |           |                          |  |  |        |     |         |      |         |
|--------|------|-----------|--------------------------|--|--|--------|-----|---------|------|---------|
| ca. 66 | 1400 | 12,0      | without auxiliary spring |  |  | ca. 20 | 325 | 5,0     | 1380 | 0       |
|        | 1430 | 8,5       |                          |  |  |        | 200 | 19-21   | 1000 | 0,4-0,6 |
|        | 1460 | 4,8       | with auxiliary spring    |  |  |        | 325 | 5,4-5,6 | 600  | 1,2-1,4 |
|        | 1420 | 9,2-10,4  |                          |  |  |        | 450 | 2,7-4,1 |      |         |
|        | 1500 | 2,0 - 3,4 |                          |  |  |        | 660 | 0 - 1,5 |      |         |
|        | 1580 | 0,3 - 1,0 |                          |  |  |        |     |         |      |         |

325 - 1400 A 8 B 2011 DL

|        |      |            |  |  |  |        |         |         |      |           |
|--------|------|------------|--|--|--|--------|---------|---------|------|-----------|
| loose  | 800  | 0,3-1,0    |  |  |  | ca. 20 | 325     | 5,0     | 1400 | 10,8-10,9 |
|        |      |            |  |  |  |        | 100     | min. 19 | 750  | 11,7-11,9 |
| ca. 64 | 1440 | 1450 = 9,8 |  |  |  |        | 325     | 5,6-5,7 | 500  | 11,8-11,9 |
|        | 1475 | 1505 = 4,0 |  |  |  |        | 500-560 | = 2,0   |      |           |
|        | 1550 | = 0,3-1,7  |  |  |  |        | 700     | 0 - 1   |      |           |

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| Upper rated speed                     |         |                       | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Sliding sleeve travel |    |
|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-----------------------|----|
| Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | rev/min               | mm |
| 1                                     | 2       | 3                     | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                    | 11 |

425 - 1500 A 5 B 501 DL with pump 1255

|        |      |             |  |  |  |        |     |           |      |           |
|--------|------|-------------|--|--|--|--------|-----|-----------|------|-----------|
| loose  | 800  | 0,3 - 1,0   |  |  |  | ca. 23 | 425 | 5,5       | 1500 | 10,5-10,6 |
|        | X    | = 3,75      |  |  |  |        | 100 | min. 19,0 | 1020 | 10,9-11,1 |
| ca. 66 | 1540 | 1550 = 9,5  |  |  |  |        | 425 | 5,9-6,1   | 500  | 11,5-11,6 |
|        | 1590 | 1620 = 4,0  |  |  |  |        | 610 | 670 = 2,0 |      |           |
|        | 1725 | = 0,3 - 1,7 |  |  |  |        | 750 | 0 - 1     |      |           |

325 - 1250 A 8 B 2085 L

|        |      |             |  |  |  |        |     |           |  |  |
|--------|------|-------------|--|--|--|--------|-----|-----------|--|--|
| loose  | 800  | 0,3 - 1,0   |  |  |  | ca. 18 | 325 | 7,8       |  |  |
|        | X    | = 4,0       |  |  |  |        | 100 | min. 19   |  |  |
| ca. 56 | 1290 | 1300 = 10,0 |  |  |  |        | 325 | 8,2-8,4   |  |  |
|        | 1315 | 1345 = 4,0  |  |  |  |        | 430 | 490 = 2,0 |  |  |
|        | 1490 | = 0,3 - 1,7 |  |  |  |        |     |           |  |  |

325 - 1150 A 8 B 705 DL

|        |      |             |  |  |  |        |     |           |      |           |
|--------|------|-------------|--|--|--|--------|-----|-----------|------|-----------|
| loose  | 800  | 0,3 - 1,0   |  |  |  | ca. 21 | 325 | 5,0       | 1150 | 10,6-10,7 |
|        | X    | = 4,75      |  |  |  |        | 100 | min. 19   | 900  | 11,0-11,3 |
| ca. 54 | 1190 | 1200 = 9,6  |  |  |  |        | 325 | 5,4-5,6   | 500  | 11,6-11,7 |
|        | 1220 | 1250 = 4,0  |  |  |  |        | 390 | 450 = 2,0 |      |           |
|        | 1300 | = 0,1 - 1,7 |  |  |  |        |     |           |      |           |

325 - 1150 A 8 B 705 DL with pump 1300

|        |      |             |  |  |  |        |     |           |      |           |
|--------|------|-------------|--|--|--|--------|-----|-----------|------|-----------|
| loose  | 800  | 0,3 - 1,0   |  |  |  | ca. 17 | 325 | 7,8       | 1150 | 11,0-11,1 |
|        | X    | 6,25        |  |  |  |        | 325 | 8,2-8,4   | 840  | 11,4-11,6 |
| ca. 52 | 1190 | 1200 = 10,0 |  |  |  |        | 460 | 500 = 2,0 | 500  | 11,6-11,7 |
|        | 1235 | 1265 = 4,0  |  |  |  |        |     |           |      |           |
|        | 1400 | = 0,3 - 1,7 |  |  |  |        |     |           |      |           |

325 - 1150 A 8 B 715

|        |      |            |  |  |  |        |     |           |      |           |
|--------|------|------------|--|--|--|--------|-----|-----------|------|-----------|
| loose  | 800  | 0,3 - 1,0  |  |  |  | ca. 17 | 325 | 7,9       | 1150 | 9,0-9,1   |
|        | X    | = 4,0      |  |  |  |        | 325 | 8,3-8,5   | 950  | 9,5-9,8   |
| ca. 52 | 1190 | 1200 = 8,0 |  |  |  |        | 445 | 505 = 2,0 | 775  | 10,5-10,7 |
|        | 1205 | 1235 = 4,0 |  |  |  |        |     |           | 500  | 11,0-11,1 |
|        | 1400 | = 0,3-1,7  |  |  |  |        |     |           |      |           |

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| Upper rated speed                     |         |                       | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Sliding sleeve travel         |    |
|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-------------------------------|----|
| Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Torque-control travel rev/min | mm |
| 1                                     | 2       | 3                     | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                            | 11 |

325 - 1150 A 8 B 694 D

|        |      |           |                          |  |  |        |     |         |      |         |
|--------|------|-----------|--------------------------|--|--|--------|-----|---------|------|---------|
| ca. 54 | 1150 | 12,0      | without auxiliary spring |  |  | ca. 21 | 325 | 5,0     | 1150 | 0       |
|        | 1190 | 7,8       |                          |  |  |        | 200 | 19 - 21 |      |         |
|        | 1210 | 5,0       | with auxiliary spring    |  |  |        | 325 | 5,4-5,6 | 450  | 0,9-1,1 |
|        | 1130 | 8,0 - 9,6 |                          |  |  |        | 400 | 1,6-3,5 |      |         |
|        | 1200 | 5,0 - 7,5 |                          |  |  |        | 500 | 0 - 1   |      |         |
|        | 1210 | 0,3 - 1,0 |                          |  |  |        |     |         |      |         |

325 - 1150 A 8 B 492 DL, 493 DL, 494 DL, 657 DL

|        |      |         |                          |  |  |        |     |         |      |         |
|--------|------|---------|--------------------------|--|--|--------|-----|---------|------|---------|
| ca. 54 | 1150 | 12,0    | without auxiliary spring |  |  | ca. 21 | 325 | 5,0     | 1150 | 0       |
|        | 1180 | 9,0     |                          |  |  |        | 200 | 19-21   |      |         |
|        | 1200 | 6,4     | with auxiliary spring    |  |  |        | 325 | 5,4-5,6 | 900  | 0,4-0,6 |
|        | 1160 | 8,0-9,5 |                          |  |  |        | 400 | 1,6-3,4 |      |         |
|        | 1280 | 3,4-5,0 |                          |  |  |        | 500 | 0 - 1   |      |         |
|        | 1300 | 0,3-1   |                          |  |  |        |     |         |      |         |

325 - 1150 A 8 B 494 DL with pump 1326

|        |      |            |  |  |  |        |     |           |      |           |
|--------|------|------------|--|--|--|--------|-----|-----------|------|-----------|
| loose  | 800  | 0,3 - 1,0  |  |  |  | ca. 18 | 325 | 5,0       | 1130 | 10,5      |
|        | X    | = 4,0      |  |  |  |        | 100 | min. 19   |      |           |
| ca. 52 | 1170 | 1180 = 9,5 |  |  |  |        | 325 | 5,4-5,6   | 930  | 11,0-11,2 |
|        | 1200 | 1230 = 4,0 |  |  |  |        | 385 | 445 = 2,0 |      |           |
|        | 1370 | = 0,3-1,7  |  |  |  |        |     |           |      |           |

325 - 1150 A 8 B 494 DL with pump 1324

|        |      |             |  |  |  |        |     |           |      |           |
|--------|------|-------------|--|--|--|--------|-----|-----------|------|-----------|
| loose  | 800  | 0,3 - 1,0   |  |  |  | ca. 21 | 325 | 5,0       | 1150 | 10,6-10,7 |
|        |      |             |  |  |  |        | 100 | min. 19   |      |           |
| ca. 54 | 1190 | 1200 = 9,6  |  |  |  |        | 325 | 5,4-5,6   | 900  | 11,0-11,2 |
|        | 1220 | 1250 = 4,0  |  |  |  |        | 390 | 450 = 2,0 |      |           |
|        | 1350 | = 0,3 - 1,7 |  |  |  |        | 500 | 0 - 1     |      |           |

325 - 1150 A 8 B 494 DL with pump 1300

|        |      |             |  |  |  |        |     |           |      |           |
|--------|------|-------------|--|--|--|--------|-----|-----------|------|-----------|
| loose  | 800  | 0,3 - 1,0   |  |  |  | ca. 22 | 325 | 5,0       | 1150 | 10,5-10,6 |
|        | X    | = 5,5       |  |  |  |        | 100 | min. 19   |      |           |
| ca. 57 | 1190 | 1200 = 9,5  |  |  |  |        | 325 | 5,4-5,6   | 915  | 10,9-11,1 |
|        | 1230 | 1260 = 4,0  |  |  |  |        | 395 | 455 = 2,0 |      |           |
|        | 1400 | = 0,3 - 1,7 |  |  |  |        |     |           |      |           |

| Upper rated speed                     |         |                       | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Sliding sleeve travel         |                   |
|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-------------------------------|-------------------|
| Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Torque-control travel rev/min | control travel mm |
| 1                                     | 2       | 3                     | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                            | 11                |

## 325-1150 A 8 B 657 DL

|        |      |            |  |  |  |        |         |           |      |           |
|--------|------|------------|--|--|--|--------|---------|-----------|------|-----------|
| loose  | 800  | 0,3 - 1,0  |  |  |  | ca. 17 | 325     | 5,0       | 1150 | 10,6-10,7 |
|        | x =  | 4,25       |  |  |  |        |         |           |      |           |
| ca. 52 | 1180 | 1190 = 9,6 |  |  |  |        | 100     | min. 19   | 930  | 11,0-11,3 |
|        | 1210 | 1240 = 4,0 |  |  |  |        | 325     | 5,4 - 5,5 | 500  | 11,6-11,7 |
|        | 1380 | = 0,3-1,7  |  |  |  |        | 385-445 | = 2,0     |      |           |
|        |      |            |  |  |  |        | 500     | 0 - 1     |      |           |

## 325-1150 A 8 B 491 DL

|        |      |          |                          |  |  |        |     |         |      |         |
|--------|------|----------|--------------------------|--|--|--------|-----|---------|------|---------|
| ca. 53 | 1150 | 10,0     | without auxiliary spring |  |  | ca. 21 | 325 | 5,5     | 1150 | 0       |
|        | 1180 | 7,0      |                          |  |  |        | 200 | 19 - 21 |      |         |
|        | 1200 | 5,0      |                          |  |  |        | 325 | 5,2-5,8 | 800  | 0,2-0,4 |
|        | 1160 | 8,5-9,5  | with auxiliary spring    |  |  |        | 400 | 1,6-3,4 | 500  | 0,6-0,8 |
|        | 1200 | 4,2-5,8  |                          |  |  |        | 500 | 0 - 1   |      |         |
|        | 1300 | 0,3- 1,0 |                          |  |  |        |     |         |      |         |

## 325-1150 A 8 B 540 DL, 578 DL

|        |      |         |                          |  |  |        |     |         |      |         |
|--------|------|---------|--------------------------|--|--|--------|-----|---------|------|---------|
| ca. 54 | 1150 | 12,0    | without auxiliary spring |  |  | ca. 21 | 325 | 5,0     | 1130 | 0       |
|        | 1180 | 9,0     |                          |  |  |        | 200 | 19 - 21 |      |         |
|        | 1210 | 5,2     |                          |  |  |        | 325 | 5,4-5,6 | 900  | 0,5-0,7 |
|        | 1160 | 8,5-9,5 | with auxiliary spring    |  |  |        | 500 | 1,4-3,4 | 500  | 1,0-1,2 |
|        | 1200 | 4,2-5,8 |                          |  |  |        | 660 | 0 - 1   |      |         |
|        | 1300 | 0,3-1,5 |                          |  |  |        |     |         |      |         |

## 325-1150 A 8 B 601 DL

|        |       |          |                          |  |  |        |     |         |      |         |
|--------|-------|----------|--------------------------|--|--|--------|-----|---------|------|---------|
| ca. 56 | 1150  | 16,0     | without auxiliary spring |  |  | ca. 21 | 325 | 5,5     | 1130 | 0       |
|        | 1200  | 11,4     |                          |  |  |        | 200 | 19 - 21 |      |         |
|        | 1250  | 5,7      |                          |  |  |        | 325 | 5,2-5,8 | 900  | 0,2-0,4 |
|        | 1220  | 7,7-12,4 | with auxiliary spring    |  |  |        | 400 | 1,4-3,3 | 500  | 0,6-0,8 |
|        | 1260  | 3,0-6,4  |                          |  |  |        | 500 | 0 -1,5  |      |         |
|        | 1 360 | 0,3- 1,0 |                          |  |  |        |     |         |      |         |

## 325-1150 A 8 B 298 DL

|        |      |            |  |  |  |        |     |             |      |           |
|--------|------|------------|--|--|--|--------|-----|-------------|------|-----------|
| loose  | 800  | 0,3 - 1,0  |  |  |  | ca. 21 | 325 | 5,0         | 1150 | 10,5-10,6 |
|        | x =  | 4,75       |  |  |  |        | 100 | min. 19,0   | 850  | 10,8-11,1 |
| ca. 55 | 1190 | 1200 = 9,5 |  |  |  |        | 325 | 5,4-5,6     | 500  | 11,2-11,3 |
|        | 1225 | 1255 = 4,0 |  |  |  |        | 500 | - 560 = 2,0 |      |           |
|        | 1350 | = 0,3-1,7  |  |  |  |        |     |             |      |           |

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| Upper rated speed                     |         |                    | Intermediate rated speed              |         |                    | Lower rated speed                     |         |                    | Sliding sleeve travel |    |
|---------------------------------------|---------|--------------------|---------------------------------------|---------|--------------------|---------------------------------------|---------|--------------------|-----------------------|----|
| Degree of deflection of control lever |         | Control rod travel | Degree of deflection of control lever |         | Control rod travel | Degree of deflection of control lever |         | Control rod travel | Torque-control travel |    |
| 1                                     | rev/min | mm                 | 4                                     | rev/min | mm                 | 7                                     | rev/min | mm                 | rev/min               | mm |
| 2                                     | 3       |                    | 5                                     | 6       |                    | 8                                     | 9       |                    | 10                    | 11 |

## 325-1150 A 8 B 275 DL

|        |         |          |  |  |  |        |     |             |      |           |
|--------|---------|----------|--|--|--|--------|-----|-------------|------|-----------|
| loose  | 800     | 0,3-1,0  |  |  |  | ca. 20 | 325 | 5,0         | 1150 | 10,6-10,7 |
|        | x = 4,0 |          |  |  |  |        | 100 | min. 19     | 800  | 11,2-11,5 |
| ca. 55 | 1190    | 1200=9,6 |  |  |  | \      | 325 | 5,4-5,6     | 600  | 11,9-12,0 |
|        | 1220    | 1250=4,0 |  |  |  |        | 425 | - 485 = 2,0 |      |           |
|        | 1350    | 0,3-1,7  |  |  |  |        |     |             |      |           |

## 325-1150 A 8 E 604 DL

|        |      |          |                          |  |  |        |     |           |      |         |
|--------|------|----------|--------------------------|--|--|--------|-----|-----------|------|---------|
| ca. 56 | 1150 | 16,0     | without auxiliary spring |  |  | ca. 21 | 325 | 5,0       | 1130 | 0       |
|        | 1180 | 13,4     |                          |  |  |        | 200 | 19 - 21   | 800  | 0,5-0,7 |
|        | 1250 | 5,6      |                          |  |  |        | 325 | 5,4 - 5,6 | 500  | 0,6-0,8 |
|        | 1220 | 7,5-10,2 | with auxiliary spring    |  |  |        | 400 | 1,5 - 3,2 |      |         |
|        | 1280 | 1,6-4,4  |                          |  |  |        | 500 | 0 - 1     | 500  | 0,6-0,8 |
|        | 1360 | 0,3-1,5  |                          |  |  |        |     |           |      |         |

## 375-1150 A 8 B 590 DL

|        |      |          |                          |  |  |        |     |         |      |         |
|--------|------|----------|--------------------------|--|--|--------|-----|---------|------|---------|
| ca. 53 | 1150 | 10,0     | without auxiliary spring |  |  | ca. 20 | 375 | 5,0     | 1130 | 0       |
|        | 1170 | 7,8      |                          |  |  |        | 250 | 19 - 21 |      |         |
|        | 1200 | 4,5      |                          |  |  |        | 375 | 5,4-5,6 | 800  | 0,4-0,6 |
|        | 1170 | 7,5-8,6  | with auxiliary spring    |  |  |        | 430 | 2,0-3,8 | 500  | 0,9-1,1 |
|        | 1230 | 1,5-3,4  |                          |  |  |        | 520 | 0 - 1   |      |         |
|        | 1300 | 0,3- 1,0 |                          |  |  |        |     |         |      |         |

## 325-1075 A 8 B 492 DL, 657 DL

|        |         |           |  |  |  |        |     |         |      |           |
|--------|---------|-----------|--|--|--|--------|-----|---------|------|-----------|
| loose  | 800     | 0,3-1,0   |  |  |  | ca. 21 | 325 | 5,0     | 1075 | 11,0-11,1 |
|        | x = 4,5 |           |  |  |  |        | 100 | min. 19 | 900  | 11,4-11,7 |
| ca. 52 | 1115    | 1125=10,0 |  |  |  |        | 325 | 5,4-5,6 | 500  | 12,0-12,1 |
|        | 1160    | 1190= 4,0 |  |  |  |        | 380 | 440=2,0 |      |           |
|        | 1300    | 0,3 - 1,7 |  |  |  |        |     |         |      |           |

## 325-1050 A 8 B 532 DL

|        |      |         |                          |  |  |        |     |         |      |         |
|--------|------|---------|--------------------------|--|--|--------|-----|---------|------|---------|
| ca. 49 | 1050 | 10,0    | without auxiliary spring |  |  | ca. 21 | 325 | 5,0     | 1030 | 0       |
|        | 1080 | 6,8     |                          |  |  |        | 200 | 19 - 21 | 800  | 0       |
|        | 1100 | 4,5     |                          |  |  |        | 325 | 5,4-5,6 | 700  | 0,2-0,4 |
|        | 1060 | 8,5-9,5 | with auxiliary spring    |  |  |        | 400 | 1,6-3,4 | 500  | 0,6-0,8 |
|        | 1120 | 2,5-4,1 |                          |  |  |        | 500 | 0 - 1   |      |         |
|        | 1200 | 0,3-1,0 |                          |  |  |        |     |         |      |         |

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| Upper rated speed                     |         |                       | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Sliding sleeve travel         |    |
|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-------------------------------|----|
| Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Torque-control travel rev/min | mm |
| 1                                     | 2       | 3                     | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                            | 11 |

## 325-1050 A 8 B 577 DL

|        |      |           |                          |        |     |         |      |         |
|--------|------|-----------|--------------------------|--------|-----|---------|------|---------|
| ca. 51 | 1050 | 16,0      | without auxiliary spring | ca. 21 | 325 | 5,0     | 1030 | 0       |
|        | 1100 | 11,0      |                          |        | 200 | 19 - 21 | 800  | 0       |
|        | 1150 | 5,0       |                          |        | 325 | 5,4-5,6 | 700  | 0,1-0,2 |
|        | 1070 | 14,0-14,8 | with auxiliary spring    | ca. 21 | 400 | 1,6-3,4 | 500  | 0,6-0,8 |
|        | 1130 | 6,0-9,4   |                          |        | 500 | 0 - 1   |      |         |
|        | 1250 | 0,3-1,0   |                          |        |     |         |      |         |

## 325-1000 A 8 B 588 DL

|        |           |           |  |  |  |        |         |         |     |           |
|--------|-----------|-----------|--|--|--|--------|---------|---------|-----|-----------|
| loose  | 800       | 0,3-1,0   |  |  |  | ca. 16 | 325     | 5,0     | 980 | 10,8-10,9 |
|        | x         | = 4,25    |  |  |  |        | 100     | min. 19 | 800 | 11,1-11,4 |
| ca. 41 | 1020-1030 | = 9,8     |  |  |  |        | 325     | 5,4-5,6 | 500 | 11,8-11,9 |
|        | 1060-1090 | = 4,0     |  |  |  |        | 380-440 | = 2,0   |     |           |
|        | 1200      | = 0,3-1,7 |  |  |  |        |         |         |     |           |

## 325-1000 A 8 B 598 DL

|        |             |            |                          |  |  |        |            |            |     |   |         |         |         |
|--------|-------------|------------|--------------------------|--|--|--------|------------|------------|-----|---|---------|---------|---------|
| ca. 48 | 1000        | 16,0       | without auxiliary spring |  |  | ca. 19 | <u>325</u> | <u>5,5</u> | 980 | 0 |         |         |         |
|        | 1050        | 11,1       |                          |  |  |        | 200        | 19 - 21    |     |   |         |         |         |
|        | <u>1100</u> | <u>5,0</u> |                          |  |  |        | 325        | 5,2-5,8    |     |   |         |         |         |
|        | 1060        | 9,0-11,0   | with auxiliary spring    |  |  |        |            | 400        |     |   | 1,2-4,0 | 450     | 0,3-0,5 |
|        | 1120        | 2,2-4,6    |                          |  |  |        |            | 480        |     |   | 0 - 1   | 0,9-1,1 |         |
|        | 1220        | 0,3-1,5    |                          |  |  |        |            |            |     |   |         |         |         |

## 375-1000 A 8 B 606 DL

|        |          |           |  |  |  |        |               |         |      |           |
|--------|----------|-----------|--|--|--|--------|---------------|---------|------|-----------|
| loose  | 800      | 0,3-1,0   |  |  |  | ca. 20 | 375           | 5,0     | 1000 | 11,2-11,3 |
|        | x = 4,25 |           |  |  |  |        | 100           | min. 19 |      |           |
| ca. 47 | 1040     | 1050=10,2 |  |  |  |        | 375           | 5,4-5,6 | 500  | 12,2-12,3 |
|        | 1075     | 1105= 4,0 |  |  |  |        |               |         |      |           |
|        | 1200     | 0,3-1,7   |  |  |  |        | 420-480 = 2,0 |         |      |           |

## 325-1000 A 8 B 733 DL

|        |      |           |  |  |  |        |             |            |      |         |
|--------|------|-----------|--|--|--|--------|-------------|------------|------|---------|
| loose  | 800  | 0,3-1,0   |  |  |  | ca. 19 | <u>325</u>  | <u>5,0</u> | 1000 | 0       |
|        | x =  | 4,25      |  |  |  |        |             |            |      |         |
| ca. 48 | 1060 | 1080= 9,2 |  |  |  |        | 100         | min. 19    | 800  | 0,2-0,3 |
|        | 1090 | 1130= 4,0 |  |  |  |        | 325         | 5,4-5,6    | 500  | 1,0-1,1 |
|        | 1160 | 0,3-1,7   |  |  |  |        | 380-430=2,0 |            |      |         |
|        |      |           |  |  |  |        | 520         | 0 - 1      |      |         |

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| Upper rated speed                              |         |                             | Intermediate rated speed                       |         |                             | Lower rated speed                              |         |                             | Sliding sleeve travel<br>Torque-control travel |    |
|--|---------|-----------------------------|--|---------|-----------------------------|--|---------|-----------------------------|--|----|
| Degree of<br>deflection<br>of control<br>lever | rev/min | Control rod<br>travel<br>mm | Degree of<br>deflection<br>of control<br>lever | rev/min | Control rod<br>travel<br>mm | Degree of<br>deflection<br>of control<br>lever | rev/min | Control rod<br>travel<br>mm | rev/min  | mm |
| 1  | 2       | 3                           | 4  | 5       | 6                           | 7  | 8       | 9                           | 10   | 11 |

## 325-1000 A 8 B 1032 DL

|       |          |               |  |  |  |        |             |         |      |           |
|-------|----------|---------------|--|--|--|--------|-------------|---------|------|-----------|
| loose | 800      | 0,3-1,0       |  |  |  | ca. 19 | 325         | 5,0     | 1000 | 10,8-10,9 |
|       | x = 4,25 |               |  |  |  |        | 100         | min. 19 | 750  | 11,1-11,4 |
|       | ca. 47   | 1040-1050=9,8 |  |  |  |        | 325         | 5,4-5,6 | 500  | 11,5-11,6 |
|       |          | 1075-1105=4,0 |  |  |  |        | 480-580=2,0 |         |      |           |
|       |          | 1200= 0,3-1,7 |  |  |  |        |             |         |      |           |

## 325-900 A 7 B 494 DL

|        |      |          |                          |  |  |        |     |         |   |   |
|--------|------|----------|--------------------------|--|--|--------|-----|---------|---|---|
| ca. 59 | 900  | 16,0     | without auxiliary spring |  |  | ca. 26 | 325 | 5,5     | - | - |
|        | 950  | 10,0     |                          |  |  |        | 100 | 19 - 21 |   |   |
|        | 1000 | 2,4      |                          |  |  |        | 325 | 5,2-5,8 |   |   |
|        | 900  | ca. 11,0 |                          |  |  |        | 360 | 2,6-4,0 |   |   |
|        | 960  | 7,0-9,6  | with auxiliary spring    |  |  |        | 450 | 0 - 1,5 |   |   |
|        | 1050 | 0,3-1,5  |                          |  |  |        |     |         |   |   |

## 325-900 A 7 B 602 DL

|       |         |               |  |  |  |        |             |         |  |  |
|-------|---------|---------------|--|--|--|--------|-------------|---------|--|--|
| loose | 800     | 0,3-1,0       |  |  |  | ca. 26 | 325         | 5,0     |  |  |
|       | x = 5,5 |               |  |  |  |        | 100         | min. 19 |  |  |
|       | ca. 58  | 920-930=9,2   |  |  |  |        | 325         | 5,4-5,6 |  |  |
|       |         | 945-975=4,0   |  |  |  |        | 360-420=2,0 |         |  |  |
|       |         | 1100= 0,3-1,7 |  |  |  |        |             |         |  |  |

## 325-900 A 7 B 634 DL

|        |      |         |                          |  |  |        |     |         |  |  |
|--------|------|---------|--------------------------|--|--|--------|-----|---------|--|--|
| ca. 57 | 900  | 12,0    | without auxiliary spring |  |  | ca. 26 | 325 | 5,0     |  |  |
|        | 920  | 8,4     |                          |  |  |        | 100 | min. 19 |  |  |
|        | 940  | 5,5     |                          |  |  |        | 325 | 5,4-5,6 |  |  |
|        | 920  | 8,0-9,5 |                          |  |  |        | 360 | 3,0-4,3 |  |  |
|        | 950  | 2,0-4,0 | with auxiliary spring    |  |  |        | 450 | 0 - 1,5 |  |  |
|        | 1020 | 0,3-1,5 |                          |  |  |        |     |         |  |  |

## 325-900 A 7 B 2011 D

|       |         |               |  |  |  |        |               |         |     |         |
|-------|---------|---------------|--|--|--|--------|---------------|---------|-----|---------|
| loose | 800     | 0,3-1,0       |  |  |  | ca. 26 | 325           | 5,5     | 900 | 0       |
|       | x = 5,5 |               |  |  |  |        | 100           | min. 19 | 600 | 0,6-0,8 |
|       | ca. 60  | 940-950=10,6  |  |  |  |        | 325           | 6,0-6,1 | 400 | 0,9-1,1 |
|       |         | 965-995= 4,0  |  |  |  |        | 430-500 = 2,0 |         |     |         |
|       |         | 1100= 0,3-1,7 |  |  |  |        | 600           | 0 - 1   |     |         |

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| Upper rated speed                     |         |                       | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Sliding sleeve travel |                          |
|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-----------------------|--------------------------|
| Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | rev/min               | Torque-control travel mm |
| 1                                     | 2       | 3                     | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                    | 11                       |

325-750 A 7 B 633 DL

|        |            |            |                          |         |       |        |            |            |     |   |
|--------|------------|------------|--------------------------|---------|-------|--------|------------|------------|-----|---|
| ca. 45 | 750        | 16,0       | without auxiliary spring |         |       | ca. 21 | <u>325</u> | <u>5,5</u> | 730 | 0 |
|        | 775        | 11,4       |                          |         |       |        | 180        | 19 - 21    |     |   |
|        | <u>800</u> | <u>6,0</u> |                          |         |       |        | 325        | 5,2-5,8    |     |   |
|        | 760        | 9,2-10,4   | 420                      | 2,0-3,6 |       |        |            |            |     |   |
|        | 850        | 1,5-3,3    | with auxiliary spring    | 580     | 0 - 1 |        |            |            |     |   |
|        | 920        | 0,3- 1     |                          |         |       |        |            |            |     |   |

EP/RS 275/1400 A 0 B 496 DL

|           |      |          |  |  |  |           |     |         |      |         |
|-----------|------|----------|--|--|--|-----------|-----|---------|------|---------|
| * VHca.72 | 1400 | 9,8      |  |  |  | * VH max. | 285 | 5,9     | 1380 | 0       |
|           | 1400 | 9,8-10,6 |  |  |  |           | 150 | 20 - 21 |      |         |
| * FH max. | 1420 | 7,6-9,2  |  |  |  | * FHca.40 | 285 | 5,6-6,2 | 900  | 0,4-0,6 |
|           | 1450 | 4,6-6,4  |  |  |  |           | 400 | 3,2-4,7 |      |         |
|           | 1500 | 2,0-3,8  |  |  |  |           | 600 | 0 - 1   | 400  | 0,8-1,0 |
|           | 1600 | 0,3- 1   |  |  |  |           |     |         |      |         |

EP/RS 325/1400 A 0 B 620 DL

|           |      |           |   |   |   |           |     |          |      |         |
|-----------|------|-----------|---|---|---|-----------|-----|----------|------|---------|
| * VHca.73 | 1400 | 15,8-16,4 | - | - | - | * VH max. | 325 | 8,3      | 1380 | 0       |
|           | 1450 | 12,9-14,0 |   |   |   |           | 260 | 9,1-10,0 |      |         |
| * FH max. | 1500 | 9,9-11,5  |   |   |   | * FHca31  | 300 | 8,4-9,1  | 1000 | 0,8-1,0 |
|           | 1550 | 6,6-8,5   |   |   |   |           | 350 | 7,4-7,9  |      |         |
|           | 1600 | 2,9-5,2   |   |   |   |           | 450 | 4,1-5,6  |      |         |
|           | 1660 | 0,3-1,0   |   |   |   |           | 550 | 3,5-4,0  | 600  | 1,2-1,4 |
|           |      |           |   |   |   |           | 800 | 3,5-4,0  |      |         |

EP/RS 325/1650 A 0 B 2087 L

|           |           |           |  |  |  |           |         |          |  |  |
|-----------|-----------|-----------|--|--|--|-----------|---------|----------|--|--|
| * VHca.49 | 800       | 0,3-1,0   |  |  |  | * VH max. | 325     | 6,0      |  |  |
|           |           |           |  |  |  |           | 100     | min.10,8 |  |  |
| * FH max  | 1690-1700 | =8,9      |  |  |  | * FHca18  | 450-490 | =2,0     |  |  |
|           | 1740-1770 | =4,0      |  |  |  |           | 600     | 1,8      |  |  |
|           | 1900      | = 0,3-1,7 |  |  |  |           |         |          |  |  |

VH=Control lever

\* FH=Accelerato lever

|  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|

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EP/RS 325/1400 AO B620DL is an idle maximum speed governor of a new kind. Compared with the EP/RSV governor it has the following characteristics:

- a) The speed control lever is fixed with blocking screws.
- b) The shutoff arm serves as driving lever (delivery lever).
- c) A steel bolt pressed into the governor housing serves as the max. speed stop of the driving lever.
- d) The lower idle speed is governed by a spring in the torque-control capsule.
- e) There are no idle auxiliary spring or stop/idle-stop screw.

The testing and adjustment of the governor correspond partly to that of the EP/RSV.- governor (see Test Instructions VDT-WPP 001/4-1st. suppl.). Those work steps which are different are listed below.

Preliminary mechanical test see Test Instructions, section 1.

To 1.a): The stop screw must no longer be set.

To 1.b): When testing the full control-rod travel, the driving lever should be brought into the full load position.

#### Adjusting and testing

The clamping device 1 688 040 122 - EFEP 56 C/4 should be used for mounting the adjusting device 0 681 440 006 - EFEP 56 C.

1. Basic position of the governor spring and testing of the control-rod travel at upper rated speed see Test Instructions, step 1.  
Test specifications see section B, columns 1-3.

Fix the resulting final control-lever position with the stop screw.

Pull the drive lever with spring at max. speed stop if necessary.

Additional instructions: The difference in the control-rod travel between rising and falling speed must not exceed 1 mm..

When driving lever is in rated speed position press the stop button.  
The control rod must also reach stop position.

2. Adjusting the full-load delivery: see Test Instructions, step 2.  
Drive lever in position - full load.  
Test specifications see section C, columns 1-2.
3. Adjusting the torque control: see Test Instructions, steps 3 and 3a.  
Drive lever in position - full load.  
Test specifications see section B, columns 10-11 and section C, columns 4-5.
4. Check the idle-speed control (replaces step 4 of the test instructions).  
Adjusting device EFEP 56.. should be removed from the control lever and adjust according to drive lever. (Please note: drive lever horizontal position = 40°).  
Test specifications see section B, columns 7-9.

Drive the pump at the speed shown in the frame and adjust the drive lever so that the relevant control-rod travel can be reached. In this way the drive lever position should correspond to the value given.

Clamp the drive lever firmly.

Check the control-rod travel lengths at the speeds prescribed. If necessary, change the spring retainer and repeat the test from 3. The difference between rising and falling speeds must not exceed 0.7 mm..

5. Step 5 of the Test Instructions is no longer required.
6. Adjusting the breakaway: see Test Instructions, step 6. Test specifications see section C, column 3.

When adjustment has successfully been completed, block the control lever with both stop screws.

# B. Governor Settings

2

| Checking of slider<br>PRG check |                       | Full load speed regulation |                       |                       |           | Idle speed regulation |                       |                     |                       | Torque control |                       |
|---------------------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------|-----------------------|-----------------------|---------------------|-----------------------|----------------|-----------------------|
| ①                               |                       | Setting point              |                       | Test specifications   |           | Setting point         |                       | Test specifications |                       | ③              |                       |
| rev/min                         | Control rod travel mm | rev/min                    | Control rod travel mm | Control rod travel mm | rev/min   | rev/min               | Control rod travel mm | rev/min             | Control rod travel mm | rev/min        | Control rod travel mm |
| 1                               | 2                     | 3                          | 4                     | 5                     | 6         | 7                     | 8                     | 9                   | 10                    | 11             | 12                    |
| RQ                              | 275/1400 AB           | 694 D                      | 798 D                 |                       |           |                       |                       |                     |                       |                |                       |
| 1300                            | 13,7-14,3             | 1300                       | 14,0                  | 1420                  | 13,6-14,0 | 640                   | 0                     | 100                 | 6,2-8,1               | 650            | 15,8-16,0             |
|                                 |                       |                            |                       | 1460                  | 9,6-13,0  |                       |                       | 250                 | 4,8-6,3               | 900            | 14,9-15,3             |
|                                 |                       |                            |                       | 1530                  | 0 - 9     |                       |                       | 350                 | 3,0-5,2               | 1100           | 14,0-14,3             |
|                                 |                       |                            |                       | 1620                  | 0         |                       |                       | 540                 | 0                     |                |                       |

Torque-control travel on flyweight assembly dimension a = 0,65 mm Speed regulation At 1 mm less control rod travel

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery on governor control lever<br>Test oil temp 40°C (104°F) |                                | Control rod stop |  | Fuel delivery characteristics |                                | Starting fuel delivery<br>Idle speed |                                    |
|--|--------------------------------|------------------|--|-------------------------------|--------------------------------|--------------------------------------|------------------------------------|
| ②  |                                | ③a               |  | ③b                            |                                | ⑥                                    |                                    |
| rev/min  | cm <sup>3</sup> /-1000 strokes | rev/min          |  | rev/min                       | cm <sup>3</sup> /-1000 strokes | rev/min                              | cm <sup>3</sup> /1000 strokes / mm |
| 1  | 2                              | 3                |  | 4                             | 5                              | 6                                    | 7                                  |
|  |                                |                  |  |                               |                                |                                      |                                    |

Checking values in brackets

# B. Governor Settings

| Checking of slider<br>PRG check |                       | Full load speed regulation |                       |                       |         | Idle speed regulation |                       |                     |                       | Torque control |                       |
|---------------------------------|-----------------------|----------------------------|-----------------------|-----------------------|---------|-----------------------|-----------------------|---------------------|-----------------------|----------------|-----------------------|
| ①                               |                       | Setting point              |                       | Test specifications   |         | Setting point         |                       | Test specifications |                       | ③              |                       |
| rev/min                         | Control rod travel mm | rev/min                    | Control rod travel mm | Control rod travel mm | rev/min | rev/min               | Control rod travel mm | rev/min             | Control rod travel mm | rev/min        | Control rod travel mm |
| 1                               | 2                     | 3                          | 4                     | 5                     | 6       | 7                     | 8                     | 9                   | 10                    | 11             | 12                    |
|                                 |                       |                            |                       |                       |         |                       |                       |                     |                       |                |                       |

Torque-control travel on flyweight assembly dimension a = mm Speed regulation At 1 mm less control rod travel

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery on governor control lever<br>Test oil temp 40°C (104°F) |                                | Control rod stop |  | Fuel delivery characteristics |                                | Starting fuel delivery<br>Idle speed |                                    |
|--|--------------------------------|------------------|--|-------------------------------|--------------------------------|--------------------------------------|------------------------------------|
| ②  |                                | ③a               |  | ③b                            |                                | ⑥                                    |                                    |
| rev/min  | cm <sup>3</sup> /-1000 strokes | rev/min          |  | rev/min                       | cm <sup>3</sup> /-1000 strokes | rev/min                              | cm <sup>3</sup> /1000 strokes / mm |
| 1  | 2                              | 3                |  | 4                             | 5                              | 6                                    | 7                                  |
|  |                                |                  |  |                               |                                |                                      |                                    |

Checking values in brackets

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| Upper rated speed                     |         |                       | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Sliding sleeve travel         |                          |
|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-------------------------------|--------------------------|
| Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Torque-control travel rev/min | Torque-control travel mm |
| 1                                     | 2       | 3                     | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                            | 11                       |

RQV 275-1400 AB 757 D, 799 D

|        |      |           |   |   |   |                |     |         |                |         |
|--------|------|-----------|---|---|---|----------------|-----|---------|----------------|---------|
| ca. 68 | 1400 | 15,0-18,2 | - | - | - | torque-control | 240 | 6,0-8,0 | Maß a = 0,9 mm |         |
|        | 1480 | 7,8-13,0  |   |   |   |                | 350 | 2,8-4,8 | 1400           | 0       |
|        | 1560 | 0 - 7,2   |   |   |   |                | 500 | 2,4-3,8 | 1100           | 0,4-0,6 |
|        | 1660 | 0         |   |   |   |                | 700 | 0,8-2,2 | 600            | 0,8-1,0 |
|        |      |           |   |   |   |                | 890 | 0       |                |         |

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### C. Settings for Fuel Injection Pump with Fitted Governor

| <b>(2b)</b> Full-load stop<br>Test oil temp 40°C (104°F)<br>rev/min<br>1 |             | <b>(6)</b> Rotational-<br>speed limit<br>Note<br>changed to )<br>rev/min<br>3 | <b>(3a)</b> Fuel delivery<br>characteristics<br>rev/min<br>4<br>cm <sup>3</sup> /1000 strokes<br>5 |           | Output and speed<br>- ..PS / ..U/min.<br>(F- or B-power) |
|--|-------------|---|--|-----------|--|
|  | F 2 L 912 - | PES 2 A 80 D  | 310/3  | RS 1322   |  |
| 1400   | 60,0-61,0   | 1440  | 700  | 54,5-56,5 | 28 kW / n = 2800   |
| 1250   | 50,5-52,5   | 1270  | 800  | 44,0-47,0 | 23 kW / n = 2500   |
| 1250   | 45,5-47,5   | 1270  | 800  | 38,0-41,0 | 21 kW / n = 2500   |
| 1250   | 36,5-38,5   | 1270  | 800  | 31,0-34,0 | 18 kW / n = 2500   |
| 1200   | 59,5-61,5   | 1220  | 800  | 56,5-59,5 | 26 kW / n = 2400   |
| 1150   | 45,5-47,5   | 1170  | 800  | 38,5-47,5 | 20 kW / n = 2300   |
| 1075   | 48,0-50,0   | 1095  | 800  | 44,0-47,0 | 21 kW / n = 2150   |
| 1000   | 58,5-60,5   | 1020  | 800  | 57,5-60,5 | 23 kW / n = 2000   |
| 950  | 57,5-59,5   | 970   | 800  | 56,5-59,5 | 22 kW / n = 1900   |
| 900  | 57,5-59,5   | 920   | -  | -         | 21 kW / n = 1800   |
| 900  | 47,0-49,0   | 920   | 800  | 47,0-50,0 | 19 kW / n = 1800   |
| 900  | 55,0-56,0   | 940   | -  | -         | 18,5 kW / n = 1800                                       |
| 900  | 38,5-40,5   | 920   | 800  | 37,0-40,0 | 16,5 kW / n = 1800                                       |
| 800  | 31,5-33,5   | 820   | -  | -         | 13 kW / n = 1600   |
| 750  | 40,5-42,5   | 760   | -  | -         | 15,0 kW / n = 1500                                       |
| 750  | 60,5-62,5   | 760   | -  | -         | 18,0 kW / n = 1500                                       |
| 750  | 35,5-37,5   | 760   | -  | -         | 14,0 kW / n = 1500                                       |
| ICXN-power output (10% above rated output)                               |             |   |  |           |  |
| 900  | 63,5-65,5   | 910   | -  | -         | A 20,0 (+10%) / n = 1800                                 |
| 900  | 51,0-53,0   | 910   | -  | -         | A 18,0 (+10%) / n = 1800                                 |
| 750  | 59,5-61,5   | 760   | -  | -         | A 16,5 (+10%) / n = 1500                                 |
| I5N-power output (5% above rated output)                                 |             |   |  |           |  |
| 900  | 63,0-65,0   | 910   | -  | -         | A 21,0 (+ 5%) / n = 1800                                 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

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| <b>(2b) Full-load stop</b><br>Test oil temp 40°C (104°F)<br>rev/min 1    cm <sup>3</sup> /1000 strokes 2 |           | <b>(6) Rotational speed limit</b><br>Note<br>changed to 1<br>rev/min 3 | <b>(3a) Fuel delivery characteristics</b><br>rev/min 4    cm <sup>3</sup> /1000 strokes 5 |           | Output and speed<br>- ..PS / ..U/min. |           |
|--|-----------|--|---|-----------|---------------------------------------|-----------|
| F 3 L 912 - PES 3A 80  |           | D 410/3 RS 1183, 1324  |   |           | (F- or B-power output)                |           |
| 1500   | 57,5-59,5 | 1520   | 800   | 41,5-44,5 | 38,3 kW (52 PS) /                     | n = 3000  |
| 1500   | 53,5-55,5 | 1520   | 800   | 37,5-40,5 | 34,6 kW (47 PS) /                     | n = 3000  |
| 1400   | 65,5-67,5 | 1420   | 800   | 51,5-54,5 | 42,7 kW (58 PS) /                     | n = 2800  |
| 1400   | 60,5-62,5 | 1420   | 800   | 48,5-51,5 | 40,5 kW (55 PS) /                     | n = 2800  |
| 1325   | 63,5-65,5 | 1340   | 800   | 50,5-53,5 | 41,2 kW (56 PS) /                     | n = 2650  |
| 1325   | 59,0-61,0 | 1340   | 800   | 47,5-50,5 | 39,0 kW (53 PS) /                     | n = 2650  |
| 1300   | 55,5-57,5 | 1320   | 800   | 43,5-46,5 | 36,8 kW (50 PS) /                     | n = 2600  |
| 1250   | 62,0-64,0 | 1270   | 800   | 51,5-54,5 | 39,7 kW (54 PS) /                     | n = 2500  |
| 1250   | 59,5-61,5 | 1270   | 800   | 51,5-54,5 | 39,0 kW /                             | n = 2500  |
| 1250   | 58,5-60,5 | 1270   | 800   | 50,5-53,5 | 38,0 kW /                             | n = 2500  |
| 1250   | 56,5-58,5 | 1270   | 800   | 48,0-51,0 | 37,0 kW /                             | n = 2500  |
| 1250   | 49,5-51,5 | 1270   | 800   | 40,5-43,5 | 33,0 kW /                             | n = 2500  |
| 1225   | 56,0-58,0 | 1240   | 800   | 46,5-49,5 | 36,8 kW (50 PS) /                     | n = 2450  |
| 1200   | 60,5-62,5 | 1220   | 800   | 51,5-54,5 | 39,0 kW (53 PS) /                     | n = 2400  |
| 1200   | 58,0-60,0 | 1220   | 800   | 48,5-51,5 | 37,5 kW (51 PS) /                     | n = 2400  |
| 1200   | 54,5-56,5 | 1220   | 800   | 47,5-50,5 | 36,0 kW /                             | n = 2400  |
| 1175   | 59,5-60,5 | 1195   | 775   | 55,5-56,5 | 38,0 kW /                             | n = 2350* |
| 1175   | 50,5-51,5 | 1195   | 775   | 48,5-49,5 | 33,0 kW /                             | n = 2350* |
| 1150   | 59,0-61,0 | 1170   | 775   | 55,0-58,0 | 37,5 kW (51 PS) /                     | n = 2300  |
| 1150   | 57,5-58,5 | 1170   | 775   | 56,0-57,0 | 37,0 kW /                             | n = 2300* |
| 1150   | 56,0-58,0 | 1170   | 800   | 52,0-55,0 | 36,0 kW /                             | n = 2300  |
| 1150   | 53,0-55,0 | 1170   | 775   | 48,5-51,5 | 35,0 kW /                             | n = 2300  |
| 1150   | 48,5-50,5 | 1170   | 800   | 44,0-47,0 | 32,0 kW /                             | n = 2300  |
| 1100   | 44,5-46,5 | 1170   | 800   | 38,5-41,5 | 29,0 kW /                             | n = 2300  |
| 1100   | 55,5-57,5 | 1120   | 775   | 52,5-55,5 | 35,3 kW (48 PS) /                     | n = 2200  |
| 1095   | 50,5-52,5 | 1115   | 775   | 53,5-56,5 | 33,0 kW /                             | n = 2190  |
| 1075   | 57,5-59,5 | 1090   | 775   | 54,5-57,5 | 36,0 kW (49 PS) /                     | n = 2150  |
| 1075   | 54,5-56,5 | 1090   | 775   | 51,5-54,5 | 34,6 kW (47 PS) /                     | n = 2150  |
| 1075   | 47,0-49,0 | 1095   | 800   | 44,0-47,0 | 31,0 kW /                             | n = 2150  |
| 1075   | 41,5-42,5 | 1090   | 775   | 37,5-39,5 | 25,8 kW (35 PS) /                     | n = 2150  |
| 1050   | 45,0-47,0 | 1070   | 800   | 43,5-46,5 | 30,0 kW /                             | n = 2100  |
| 1000   | 55,5-57,5 | 1015   | 775   | 53,5-56,5 | 33,9 kW (46 PS) /                     | n = 2000  |
| 1000   | 53,0-54,0 | 1020   | 775   | 58,0-59,0 | 33,0 kW /                             | n = 2000* |
| 1000   | 49,5-51,5 | 1015   | 775   | 47,5-50,5 | 31,3 kW (42,5PS) /                    | n = 2000  |
| 1000   | 46,5-48,5 | 1020   | 800   | 45,0-49,0 | 30,0 kW /                             | n = 2000  |
| 1000   | 44,5-46,5 | 1020   | 800   | 43,5-46,5 | 29,0 kW /                             | n = 2000  |
| 1000   | 43,5-44,5 | 1020   | 775   | 46,5-47,5 | 28,0 kW /                             | n = 2000* |
| 975  | 36,5-38,5 | 995  | 800   | 33,0-36,0 | 22,0 kW /                             | n = 1950  |
| 900  | 54,0-56,0 | 910  | 775   | 53,0-56,0 | 30,9 kW (42 PS) /                     | n = 1800  |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| <b>(2b)</b> Full-load stop<br>Test oil temp 40°C (104°F) |                                    | <b>(3)</b> Rotational speed limit<br>Note changed to )<br>rev/min | <b>(3a)</b> Fuel delivery characteristics |                                    | Output and speed<br>- ..PS / ..U/min. |
|--|------------------------------------|---|---|------------------------------------|---------------------------------------|
| rev/min<br>1   | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3  | rev/min<br>4                              | cm <sup>3</sup> /1000 strokes<br>5 |                                       |
| F 3 L 912  | - PES 3 A 80                       | D 410/3 RS 1183,  | 1324                                      |                                    | (F- or B-power output) (cont.)        |
| 900  | 50,0-52,0                          | 910   | 775                                       | 50,0-53,0                          | 29,4 kW (40 PS) / n = 1800            |
| 875  | 47,0-49,0                          | 885   | 775                                       | 46,0-49,0                          | 27,6 kW (37,5PS) / n = 1750           |
| 850  | 43,5-45,5                          | 860   | 775                                       | 43,0-46,0                          | 25,4 kW (34,5PS) / n = 1700           |
| 800  | 43,0-45,0                          | 810   | -   | -                                  | 23,9 kW (32,5PS) / n = 1600           |
| 750  | 54,0-56,0                          | 760   | -   | -                                  | 26,5 kW (36 PS) / n = 1500            |
| 750  | 50,0-52,0                          | 760   | -   | -                                  | 25,0 kW (34 PS) / n = 1500            |
| 600  | 42,0-44,0                          | 620   | -   | -                                  | 18,0 kW / n = 1200                    |

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### C. Settings for Fuel Injection Pump with Fitted Governor

| <b>(2b) Full-load stop</b><br>Test oil temp 40°C (104°F) |                                    | <b>(6) Rotational speed limit</b><br>Note changed to ) | <b>(3a) Fuel delivery characteristics</b> |                                    | <b>Output and speed</b><br>- ..PS / ..U/min.      |
|--|------------------------------------|--|---|------------------------------------|---|
| rev/min<br>1   | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3   | rev/min<br>4                              | cm <sup>3</sup> /1000 strokes<br>5 |   |
| <b>F 3 L 912 - PES 3 A 80 D 410/3 RS1188,1324</b>        |                                    |  |   |                                    | <b>Power output ICXN (10% above rated output)</b> |
| 1500   | 54,5-56,5                          | 1520   | -   | -                                  | 32,4kW(44 PS)(+10%) / n = 3000                    |
| 1485   | 58,5-61,5                          | 1495   | -   | -                                  | 35,0kW (+10%) / n = 2970                          |
| 1400   | 55,0-57,0                          | 1420   | -   | -                                  | 33,9kW(46 PS)(+10%) / n = 2800                    |
| 1325   | 57,0-59,0                          | 1340   | -   | -                                  | 34,6kW(47 PS)(+10%) / n = 2650                    |
| 1250   | 54,5-56,5                          | 1270   | -   | -                                  | 33,5kW(45,5PS)(+10%) / n = 2500                   |
| 1200   | 41, -43,5                          | 1210   | -   | -                                  | 22,0kW (+10%) / n = 2400                          |
| 1150   | 59,0-61,0                          | 1170   | -   | -                                  | 34,6kW(47 PS)(+10%) / n = 2300                    |
| 1150   | 55,0-57,0                          | 1170   | -   | -                                  | 32,4kW(44 PS)(+10%) / n = 2300                    |
| 1100   | 57,5-59,5                          | 1110   | -   | -                                  | 33,0kW (+10%) / n = 2200                          |
| 1100   | 52,5-54,5                          | 1120   | -   | -                                  | 30,9kW(42 PS)(+10%) / n = 2200                    |
| 1075   | 56,5-58,5                          | 1090   | -   | -                                  | 32,4kW(44 PS)(+10%) / n = 2150                    |
| 1075   | 53,0-55,0                          | 1090   | -   | -                                  | 31,3kW(42,5PS)(+10%) / n = 2150                   |
| 1000   | 53,5-55,5                          | 1015   | -   | -                                  | 30,2kW(41 PS)(+10%) / n = 2000                    |
| 1000   | 47,0-49,0                          | 1015   | -   | -                                  | 27,2kW(37 PS)(+10%) / n = 2000                    |
| 900  | 57,0-59,0                          | 910  | -   | -                                  | 29 kW (+10%) / n = 1800                           |
| 900  | 53,0-55,0                          | 910  | -   | -                                  | 28 kW(38 PS)(+10%) / n = 1800                     |
| 900  | 50,0-52,0                          | 910  | -   | -                                  | 26,9kW(36,5PS)(+10%) / n = 1800                   |
| 900  | 43,5-45,5                          | 910  | -   | -                                  | 23,0kW (+10%) / n = 1800                          |
| 750  | 58,5-60,5                          | 760  | -   | -                                  | 25,0kW (+10%) / n = 1500                          |
| 750  | 53,5-55,5                          | 760  | -   | -                                  | 24,0kW (+10%) / n = 1500                          |
| 750  | 51,5-53,5                          | 760  | -   | -                                  | 23,6kW(32 PS)(+10%) / n = 1500                    |
| 750  | 48,5-50,5                          | 760  | -   | -                                  | 22,4kW(30,5PS)(+10%) / n = 1500                   |
| 750  | 47,0-49,0                          | 760  | -   | -                                  | 22,0kW (+10%) / n = 1500                          |
| 750  | 42,5-44,5                          | 760  | -   | -                                  | 20,0kW (+10%) / n = 1500                          |
| 750  | 35,0-37,0                          | 760  | -   | -                                  | 16,8kW (+10%) / n = 1500                          |
| <b>Power output 15N (5% above rated outout)</b>          |                                    |  |   |                                    |   |
| 900  | 59,5-61,5                          | 910  | -   | -                                  | 31,0kW ( +5%) / n = 1800                          |
| 900  | 52,0-54,0                          | 910  | -   | -                                  | 29 kW ( +5%) / n = 1800                           |

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### C. Settings for Fuel Injection Pump with Fitted Governor

| <b>(2b) Full-load stop</b><br>Test oil temp 40°C (104°F)                  |                                    | <b>(6) Rotational speed limit</b><br>Note changed to 1 | <b>(3a) Fuel delivery characteristics</b> |                                    | <b>Output and speed</b><br>- ..PS / ..U/min. |            |
|---|------------------------------------|--|---|------------------------------------|--|------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3   | rev/min<br>4                              | cm <sup>3</sup> /1000 strokes<br>5 |  |            |
| <b>F 3 L 912 - PES 3 A 75 D 410/3 RS 1183,1185 (F- or B-power output)</b> |                                    |  |   |                                    |  |            |
| 1500  | 58,5-60,5                          | 1520   | 800                                       | 45,0-48,0                          | 38,3 kW (52 PS)                              | / n = 3000 |
| 1500  | 54,5-56,5                          | 1520   | 800                                       | 41,5-44,5                          | 34,6 kW (47 PS)                              | / n = 3000 |
| 1400  | 65,0-67,0                          | 1420   | 800                                       | 53,0-56,0                          | 42,7 kW (58 PS)                              | / n = 2800 |
| 1400  | 60,5-62,5                          | 1420   | 800                                       | 50,0-53,0                          | 40,5 kW (55 PS)                              | / n = 2800 |
| 1325  | 61,0-63,0                          | 1340   | 800                                       | 52,0-55,0                          | 41,2 kW (56 PS)                              | / n = 2650 |
| 1325  | 58,0-60,0                          | 1340   | 800                                       | 49,5-52,5                          | 39,0 kW (53 PS)                              | / n = 2650 |
| 1300  | 55,0-57,0                          | 1320   | 800                                       | 46,5-49,5                          | 36,8 kW (50 PS)                              | / n = 2600 |
| 1250  | 59,0-61,0                          | 1270   | 800                                       | 53,5-56,5                          | 39,7 kW (54 PS)                              | / n = 2500 |
| 1250  | 56,5-58,5                          | 1270   | 800                                       | 50,5-53,5                          | 38,2 kW (52 PS)                              | / n = 2500 |
| 1225  | 54,5-56,5                          | 1240   | 800                                       | 48,5-51,5                          | 36,8 kW (50 PS)                              | / n = 2450 |
| 1200  | 58,0-60,0                          | 1220   | 800                                       | 53,5-56,5                          | 39,0 kW (53 PS)                              | / n = 2400 |
| 1200  | 56,0-58,0                          | 1220   | 800                                       | 51,0-54,0                          | 37,5 kW (51 PS)                              | / n = 2400 |
| 1150  | 56,5-58,5                          | 1170   | 775                                       | 55,5-58,5                          | 37,5 kW (51 PS)                              | / n = 2300 |
| 1150  | 51,5-53,5                          | 1170   | 775                                       | 51,0-54,0                          | 34,6 kW (47 PS)                              | / n = 2300 |
| 1100  | 53,5-55,5                          | 1120   | 775                                       | 54,0-57,0                          | 35,3 kW (48 PS)                              | / n = 2200 |
| 1075  | 55,5-57,5                          | 1090   | 775                                       | 55,5-58,5                          | 36,0 kW (49 PS)                              | / n = 2150 |
| 1075  | 53,0-55,0                          | 1090   | 775                                       | 53,0-56,0                          | 34,6 kW (47 PS)                              | / n = 2150 |
| 1000  | 53,5-55,5                          | 1015   | 775                                       | 54,0-57,0                          | 33,9 kW (46 PS)                              | / n = 2000 |
| 1000  | 49,5-51,5                          | 1015   | 775                                       | 49,0-52,0                          | 31,3 kW (42,5PS)                             | / n = 2000 |
| 1000  | 46,0-48,0                          | 1015   | -   | -                                  | 27,2 kW (37 PS)                              | / n = 2000 |
| 900   | 54,0-56,0                          | 910  | 775                                       | 54,5-57,5                          | 30,9 kW (42 PS)                              | / n = 1800 |
| 900   | 51,0-53,0                          | 910  | 775                                       | 52,0-55,0                          | 29,4 kW (40 PS)                              | / n = 1800 |
| 875   | 49,0-51,0                          | 885  | 775                                       | 49,0-52,0                          | 27,6 kW (37,5PS)                             | / n = 1750 |
| 850   | 46,5-48,5                          | 885  | 775                                       | 46,0-49,0                          | 25,4 kW (34,5PS)                             | / n = 1700 |
| 800   | 46,0-48,0                          | 810  | -   | -                                  | 23,9 kW (32,5PS)                             | / n = 1600 |
| 750   | 46,0-48,0                          | 760  | -   | -                                  | 26,5 kW (36 PS)                              | / n = 1500 |
| 750   | 52,5-54,5                          | 760  | -   | -                                  | 25,0 kW (34 PS)                              | / n = 1500 |

#### ICXN-power output (10% above rated output)

|      |           |      |   |   |                  |            |
|------|-----------|------|---|---|------------------|------------|
| 1500 | 54,5-56,5 | 1520 | - | - | 32,4 kW (44 PS)  | / n = 3000 |
| 1400 | 55,0-57,0 | 1420 | - | - | 33,9 kW (46 PS)  | / n = 2800 |
| 1325 | 56,0-58,0 | 1340 | - | - | 34,6 kW (47 PS)  | / n = 2650 |
| 1250 | 53,0-55,0 | 1270 | - | - | 33,5 kW (45,5PS) | / n = 2500 |
| 1150 | 56,5-58,5 | 1170 | - | - | 34,6 kW (47 PS)  | / n = 2300 |
| 1150 | 52,5-54,5 | 1170 | - | - | 32,4 kW (44 PS)  | / n = 2300 |
| 1100 | 51,0-53,0 | 1120 | - | - | 30,9 kW (42 PS)  | / n = 2200 |
| 1075 | 54,0-56,0 | 1090 | - | - | 32,4 kW (44 PS)  | / n = 2150 |
| 1075 | 51,0-53,0 | 1090 | - | - | 31,3 kW (42,5PS) | / n = 2150 |
| 1000 | 53,0-55,0 | 1015 | - | - | 30,2 kW (41 PS)  | / n = 2000 |
| 1000 | 45,5-47,5 | 1015 | - | - | 27,2 kW (37 PS)  | / n = 2000 |
| 900  | 53,0-55,0 | 910  | - | - | 28,0 kW (38 PS)  | / n = 1800 |
| 900  | 51,0-53,0 | 910  | - | - | 26,9 kW (36,5PS) | / n = 1800 |
| 900  | 47,5-49,5 | 910  | - | - | 25 kW            | / n = 1800 |
| 750  | 54,0-56,0 | 760  | - | - | 23,6 kW (32 PS)  | / n = 1500 |
| 750  | 51,0-53,0 | 760  | - | - | 22,4 kW (30,5PS) | / n = 1500 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

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| 2b Full-load stop<br>Test oil temp 40°C (104°F)<br>rev/min 1 cm³/1000 strokes 2 |  | 3 Rotational speed limit<br>Note changed to .) rev/min 3 |  | 3a Fuel delivery characteristics<br>rev/min 4 cm³/1000 strokes 5 |  | Output and speed<br>- ..PS / ..U/min. |  |
|---|--|--|--|--|--|---------------------------------------|--|
|---|--|--|--|--|--|---------------------------------------|--|

F 4 L 912 - PES 4 A 80 D 410/3 RS 1183, 1300. 2346 (F- or B-power output)

|      |           |      |     |           |                 |   |           |
|------|-----------|------|-----|-----------|-----------------|---|-----------|
| 1400 | 63,5-65,5 | 1420 | 800 | 59,5-62,5 | 58,9 kW (80 PS) | / | n = 2800  |
| 1400 | 61,0-63,0 | 1420 | 800 | 58,5-61,5 | 57,0 kW         | / | n = 2800  |
| 1350 | 52,5-54,5 | 1370 | -   | -         | 50,4 kW         | / | n = 2700  |
| 1325 | 62,5-64,5 | 1340 | 800 | 56,5-59,5 | 56,7 kW (77 PS) | / | n = 2650  |
| 1325 | 58,0-60,0 | 1345 | 800 | 54,5-57,5 | 54,0 kW         | / | n = 2650  |
| 1325 | 56,5-58,5 | 1345 | 800 | 51,5-54,5 | 52,0 kW         | / | n = 2650  |
| 1250 | 61,0-63,0 | 1270 | 800 | 56,5-59,5 | 54,5 kW (74 PS) | / | n = 2500  |
| 1250 | 60,5-62,5 | 1270 | 800 | 57,0-60,0 | 54,0 kW         | / | n = 2500  |
| 1250 | 57,0-59,0 | 1270 | 800 | 54,0-57,0 | 51,5 kW (70 PS) | / | n = 2500  |
| 1200 | 60,5-62,5 | 1220 | 800 | 56,5-59,5 | 53,0 kW (72 PS) | / | n = 2400  |
| 1200 | 58,0-60,0 | 1220 | -   | -         | 52,0 kW         | / | n = 2400  |
| 1200 | 56,0-58,0 | 1220 | 800 | 52,5-55,5 | 50,0 kW (68 PS) | / | n = 2400  |
| 1150 | 59,0-61,0 | 1170 | 775 | 59,5-62,5 | 51,5 kW (70 PS) | / | n = 2300  |
| 1150 | 59,5-60,5 | 1170 | 800 | 60,5-61,5 | 51,0 kW         | / | n = 2300* |
| 1150 | 56,5-58,5 | 1170 | 775 | 56,5-59,5 | 49,3 kW (67 PS) | / | n = 2300  |
| 1150 | 57,0-59,0 | 1170 | 800 | 55,5-58,5 | 49,0 kW         | / | n = 2300  |
| 1150 | 57,0-58,0 | 1170 | 800 | 54,5-57,5 | 48,0 kW         | / | n = 2300  |
| 1150 | 51,5-53,5 | 1170 | 775 | 51,5-54,5 | 45,6 kW (62 PS) | / | n = 2300  |
| 1150 | 48,0-50,0 | 1170 | -   | -         | 43,0 kW         | / | n = 2300  |
| 1100 | 59,0-61,0 | 1120 | 775 | 58,5-61,5 | 50,0 kW (68 PS) | / | n = 2200  |
| 1100 | 51,0-53,0 | 1120 | 775 | 51,5-54,5 | 44,1 kW (60 PS) | / | n = 2200  |
| 1075 | 59,5-61,5 | 1090 | 775 | 58,5-61,5 | 49,3 kW (67 PS) | / | n = 2150  |
| 1075 | 57,0-58,0 | 1095 | 775 | 62,0-63,0 | 48,0 kW         | / | n = 2150* |
| 1075 | 54,0-56,0 | 1090 | 775 | 54,0-57,0 | 46,3 kW (63 PS) | / | n = 2150  |
| 1075 | 48,0-50,0 | 1095 | 800 | 49,0-52,0 | 42,0 kW         | / | n = 2150  |
| 1065 | 54,0-55,0 | 1085 | 800 | 60,0-61,0 | 46,0 kW         | / | n = 2130* |
| 1050 | 54,0-56,0 | 1065 | 775 | 54,0-57,0 | 45,6 kW (62 PS) | / | n = 2100  |
| 1025 | 49,0-51,0 | 1040 | 775 | 49,5-52,5 | 41,2 kW (56 PS) | / | n = 2050  |

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# C. Settings for Fuel Injection Pump with Fitted Governor

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| <div> <div>2b</div> <div>Full-load stop</div> </div> <div> <div>Test oil temp 40°C (104°F)</div> <div>rev/min</div> <div>cm<sup>3</sup>/1000 strokes</div> </div> |   | <div> <div>3</div> <div>Rotations: speed limit</div> </div> <div> <div>Note changed to )</div> <div>rev/min</div> </div> | <div> <div>3a</div> <div>Fuel delivery characteristics</div> </div> <div> <div>rev/min</div> <div>cm<sup>3</sup>/1000 strokes</div> </div> |   | <div>Output and speed</div> <div>- ..PS / ..U/min.</div> |
|---|---|--|--|---|--|
| 1   | 2 | 3  | 4  | 5 |  |

F 4 L 912 - PES 4 A 80 D 410/3 RS 1183,1300,2346 Power output-ICXN (10% above rated output)

|      |           |      |   |   |                             |
|------|-----------|------|---|---|-----------------------------|
| 1150 | 58,5-60,5 | 1170 | - | - | 46,3 kW (63 PS) / n = 2300  |
| 1150 | 52,0-54,0 | 1170 | - | - | 42,7 kW (58 PS) / n = 2300  |
| 1100 | 52,0-54,0 | 1120 | - | - | 41,2 kW (56 PS) / n = 2200  |
| 1100 | 48,5-50,5 | 1120 | - | - | 39,0 kW (53 PS) / n = 2200  |
| 1075 | 57,0-59,0 | 1090 | - | - | 44,1 kW (60 PS) / n = 2150  |
| 1075 | 48,5-50,5 | 1090 | - | - | 38,5 kW (52,5PS) / n = 2150 |
| 1050 | 45,0-47,0 | 1065 | - | - | 35,3 kW (48 PS) / n = 2100  |
| 900  | 49,0-51,0 | 910  | - | - | 36,0 kW / n = 1800          |
| 900  | 62,0-64,0 | 910  | - | - | 40,0 kW / n = 1800          |
| 900  | 52,0-54,0 | 910  | - | - | 36,0 kW / n = 1800          |
| 900  | 42,5-44,5 | 910  | - | - | 31,0 kW / n = 1800          |
| 750  | 61,0-63,0 | 760  | - | - | 34,0 kW / n = 1500          |
| 750  | 57,0-59,0 | 760  | - | - | 32,0 kW / n = 1500          |
| 750  | 51,0-53,0 | 760  | - | - | 29,0 kW / n = 1500          |

Power output-15N (5% above rated output)

|     |           |     |   |   |                   |
|-----|-----------|-----|---|---|-------------------|
| 900 | 63,5-65,5 | 910 | - | - | 43,0kW / n = 1800 |
|-----|-----------|-----|---|---|-------------------|

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# C. Settings for Fuel Injection Pump with Fitted Governor

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| <div>2b</div> Full-load stop |                               | <div>0</div> Rotational speed limit |         | <div>3a</div> Fuel delivery characteristics |                               | Output and speed  |  |
|------------------------------|-------------------------------|-------------------------------------|---------|---|-------------------------------|-------------------|--|
| Test oil temp 40°C (104°F)   |                               | Note changed to )                   |         |   |                               | - ..PS / ..U/min. |  |
| rev/min                      | cm <sup>3</sup> /1000 strokes | rev/min                             | rev/min | rev/min                                     | cm <sup>3</sup> /1000 strokes |                   |  |
| 1                            | 2                             | 3                                   |         | 4   | 5                             |                   |  |

F 4 L 912 - PES 4 A 75 D 410/3 RS 1183,1255 (F-or B- power output)

|      |           |      |     |           |                   |   |          |
|------|-----------|------|-----|-----------|-------------------|---|----------|
| 1500 | 56,0-58,0 | 1520 | 800 | 43,0-46,0 | 51,5 kW (70 PS)   | / | n = 3000 |
| 1500 | 50,5-52,5 | 1520 | 800 | 37,0-40,0 | 46,4 kW (63 PS)   | / | n = 3000 |
| 1500 | 48,5-50,5 | 1520 | 800 | 35,0-38,0 | 44,2 kW (60 PS)   | / | n = 3000 |
| 1400 | 54,5-56,5 | 1140 | 800 | 49,5-52,5 | 53,7 kW (73 PS)   | / | n = 2800 |
| 1325 | 53,0-55,0 | 1345 | -   | -         | 52,0 kW           | / | n = 2650 |
| 1250 | 52,0-54,0 | 1270 | 800 | 52,5-55,5 | 51,0 kW           | / | n = 2500 |
| 1250 | 42,5-44,5 | 1270 | 800 | 35,5-38,5 | 38,0 kW           | / | n = 2500 |
| 1150 | 54,5-56,5 | 1170 | 775 | 59,0-62,0 | 51,5 kW (70 PS)   | / | n = 2300 |
| 1150 | 51,5-53,5 | 1170 | 775 | 55,0-58,0 | 49,3 kW (67 PS)   | / | n = 2300 |
| 1150 | 48,5-50,5 | 1170 | 775 | 48,0-51,0 | 45,6 kW (62 PS)   | / | n = 2300 |
| 1100 | 54,5-56,5 | 1120 | 775 | 59,0-62,0 | 50,0 kW (68 PS)   | / | n = 2200 |
| 1100 | 46,5-48,5 | 1120 | 775 | 48,0-51,0 | 44,2 kW (60 PS)   | / | n = 2200 |
| 1075 | 55,0-57,0 | 1090 | 775 | 58,0-61,0 | 49,3 kW (67 PS)   | / | n = 2150 |
| 1075 | 49,0-51,0 | 1090 | 775 | 52,0-55,0 | 46,4 kW (63 PS)   | / | n = 2150 |
| 1050 | 49,5-51,5 | 1065 | 775 | 52,0-55,0 | 45,6 kW (62 PS)   | / | n = 2100 |
| 1025 | 44,5-46,5 | 1040 | 775 | 46,0-49,0 | 41,2 kW (56 PS)   | / | n = 2050 |
| 1000 | 48,5-50,5 | 1020 | 800 | 48,5-51,5 | 47,0 kW           | / | n = 2000 |
| 1000 | 55,0-57,0 | 1015 | 775 | 57,0-60,0 | 46,4 kW (63 PS)   | / | n = 2000 |
| 950  | 45,5-47,5 | 960  | 775 | 46,0-49,0 | 39,7 kW (54 PS)   | / | n = 1900 |
| 900  | 56,5-58,5 | 910  | 775 | 57,0-60,0 | 42,7 kW (58 PS)   | / | n = 1800 |
| 900  | 51,5-53,5 | 910  | 775 | 52,0-55,0 | 40,5 kW (55 PS)   | / | n = 1800 |
| 875  | 45,5-47,5 | 885  | 775 | 46,0-49,0 | 36,8 kW (50 PS)   | / | n = 1750 |
| 800  | 46,5-48,5 | 810  | -   | -         | 33,5 kW (45,5 PS) | / | n = 1600 |
| 750  | 56,5-58,5 | 760  | -   | -         | 35,3 kW (48 PS)   | / | n = 1500 |
| 750  | 52,0-54,0 | 760  | -   | -         | 33,9 kW (46 PS)   | / | n = 1500 |

ICXN-power output (10% above rated output)

|      |           |      |   |   |                   |            |
|------|-----------|------|---|---|-------------------|------------|
| 1500 | 50,5-52,5 | 1520 | - | - | 43,4 kW (59 PS)   | / n = 3000 |
| 1400 | 51,0-53,0 | 1420 | - | - | 44,9 kW (61 PS)   | / n = 2800 |
| 1325 | 51,5-53,5 | 1340 | - | - | 45,6 kW (62 PS)   | / n = 2650 |
| 1250 | 50,0-52,0 | 1270 | - | - | 44,2 kW (60 PS)   | / n = 2500 |
| 1150 | 53,0-55,0 | 1170 | - | - | 46,4 kW (63 PS)   | / n = 2300 |
| 1150 | 48,5-50,5 | 1170 | - | - | 42,7 kW (58 PS)   | / n = 2300 |
| 1100 | 47,0-49,0 | 1120 | - | - | 41,2 kW (56 PS)   | / n = 2200 |
| 1100 | 44,0-46,0 | 1120 | - | - | 39,0 kW (53 PS)   | / n = 2200 |
| 1075 | 52,0-54,0 | 1090 | - | - | 44,2 kW (60 PS)   | / n = 2150 |
| 1075 | 45,0-47,0 | 1090 | - | - | 38,4 kW (52,2 PS) | / n = 2150 |
| 1050 | 40,5-42,5 | 1065 | - | - | 35,3 kW (48 PS)   | / n = 2100 |
| 1000 | 52,0-54,0 | 1015 | - | - | 41,2 kW (56 PS)   | / n = 2000 |
| 1000 | 47,0-49,0 | 1015 | - | - | 39,0 kW (53 PS)   | / n = 2000 |
| 900  | 54,5-56,5 | 910  | - | - | 38,3 kW (52 PS)   | / n = 1800 |
| 900  | 49,0-51,0 | 910  | - | - | 33,9 kW (49 PS)   | / n = 1800 |
| 900  | 40,5-42,5 | 910  | - | - | 31,0 kW           | / n = 1800 |
| 875  | 43,5-46,5 | 885  | - | - | 32,4 kW (44 PS)   | / n = 1750 |
| 750  | 53,5-55,5 | 760  | - | - | 31,6 kW (43 PS)   | / n = 1500 |
| 750  | 49,0-51,0 | 760  | - | - | 30,2 kW (41 PS)   | / n = 1500 |
| 750  | 42,5-44,5 | 760  | - | - | 26,5 kW           | / n = 1500 |
| 750  | 36,0-38,0 | 760  | - | - | 25,5 kW           | / n = 1500 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

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|  |                                    |   |              |   |  |                                       |
|--|------------------------------------|---|--------------|---|--|---------------------------------------|
| <b>2b</b> Full-load stop<br>Test oil temp 40°C (104°F) |                                    | <b>3</b> Rotational speed limits<br>Note changed to 1 rev/min |              | <b>3a</b> Fuel delivery characteristics |  | Output and speed<br>- ..PS / ..U/min. |
| rev/min<br>1   | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3  | rev/min<br>4 | cm <sup>3</sup> /1000 strokes<br>5      |  |                                       |

F 5 L 912 - PES 5 A 80 D 410/3 RS 2327,2347, (F- or B power output)

|      |           |      |     |           |                            |
|------|-----------|------|-----|-----------|----------------------------|
| 1500 | 55,0-57,0 | 1520 | 800 | 40,5-43,5 | 63,3 kW (86 PS) / n = 3000 |
| 1500 | 50,0-52,0 | 1520 | 800 | 36,5-39,5 | 57,4 kW (78 PS) / n = 3000 |
| 1400 | 63,5-65,5 | 1420 | 800 | 55,0-58,0 | 73,6 kW (100PS) / n = 2800 |
| 1400 | 58,0-60,0 | 1420 | 800 | 48,5-51,5 | 67,7 kW (92 PS) / n = 2800 |
| 1325 | 61,5-63,5 | 1340 | 800 | 54,0-57,0 | 70,7 kW (96 PS) / n = 2650 |
| 1325 | 55,5-57,5 | 1340 | 800 | 48,0-51,0 | 64,8 kW (88 PS) / n = 2650 |
| 1300 | 54,5-56,5 | 1320 | 800 | 46,5-49,5 | 63,3 kW (86 PS) / n = 2600 |
| 1250 | 59,5-61,5 | 1270 | 800 | 54,5-57,5 | 68,4 kW (93 PS) / n = 2500 |
| 1250 | 56,0-58,0 | 1270 | 800 | 50,5-54,0 | 64,8 kW (88 PS) / n = 2500 |
| 1250 | 54,5-56,5 | 1270 | 800 | 52,0-55,0 | 64,0 kW / n = 2500         |
| 1200 | 58,0-60,0 | 1220 | 800 | 56,0-59,0 | 66,2 kW (90 PS) / n = 2400 |
| 1200 | 52,5-54,5 | 1220 | 800 | 48,0-51,0 | 61,1 kW (83 PS) / n = 2400 |
| 1200 | 50,0-52,0 | 1220 | 800 | 46,5-49,5 | 58,5 kW / n = 2400         |
| 1175 | 57,5-59,5 | 1195 | 800 | 58,5-61,5 | 66,0 kW / n = 2350         |
| 1150 | 57,0-59,0 | 1170 | 775 | 56,0-59,0 | 64,8 kW (88 PS) / n = 2300 |
| 1150 | 53,0-55,0 | 1170 | 775 | 54,0-57,0 | 61,0 kW (83 PS) / n = 2300 |
| 1150 | 47,5-49,5 | 1170 | 800 | 48,5-51,5 | 55,0 kW / n = 2300         |
| 1150 | 46,0-48,0 | 1170 | 800 | 41,5-44,5 | 53,0 kW / n = 2300         |
| 1150 | 40,0-42,0 | 1170 | 800 | 29,0-32,0 | 41,0 kW / n = 2300         |
| 1100 | 55,5-57,5 | 1120 | 775 | 56,0-59,0 | 62,6 kW (85 PS) / n = 2200 |
| 1100 | 45,5-47,5 | 1120 | 775 | 43,5-46,5 | 51,5 kW (70 PS) / n = 2200 |
| 1075 | 55,5-57,5 | 1090 | 775 | 56,0-59,0 | 61,8 kW (84 PS) / n = 2150 |
| 1075 | 47,5-49,5 | 1090 | 775 | 47,5-50,5 | 54,5 kW (74 PS) / n = 2150 |
| 1000 | 55,0-57,0 | 1015 | 775 | 55,5-58,5 | 58,1 kW (79 PS) / n = 2000 |
| 1000 | 47,0-49,0 | 1015 | 775 | 47,5-50,5 | 52,3 kW (71 PS) / n = 2000 |
| 950  | 51,0-53,0 | 970  | 800 | 52,5-59,5 | 53,0 kW / n = 1900         |
| 925  | 54,0-56,0 | 945  | 775 | 56,0-59,0 | 54,0 kW / n = 1850         |
| 900  | 55,0-57,0 | 910  | 775 | 55,5-58,5 | 53,0 kW (72 PS) / n = 1800 |
| 900  | 46,0-48,0 | 910  | 775 | 47,5-50,5 | 47,1 kW (64 PS) / n = 1800 |
| 900  | 43,5-45,5 | 920  | 775 | 45,0-48,0 | 46,0 kW / n = 1800         |
| 750  | 55,5-57,5 | 760  | -   | -         | 44,2 kW (60 PS) / n = 1500 |
| 750  | 47,5-49,5 | 760  | -   | -         | 39,7 kW (54 PS) / n = 1500 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

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| <div> <div>2b</div> <div>Full-load stop</div> </div> <div>Test oil temp 40°C (104°F)</div> |                                    | <div> <div>8</div> <div>Rotational speed limit</div> </div> <div>Note changed to )</div> | <div> <div>3a</div> <div>Fuel delivery characteristics</div> </div> |                                    | Output and speed<br>- ..PS / ..U/min. |
|--|------------------------------------|--|---|------------------------------------|---------------------------------------|
| rev/min<br>1   | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3   | rev/min<br>4  | cm <sup>3</sup> /1000 strokes<br>5 |                                       |
|  |                                    |  |   |                                    |                                       |

F 5 L 912 - PES 5 A 80 D 410/3 RS 2327,2347

ICXN-power output (10% above rated output)

|      |           |      |   |   |                            |
|------|-----------|------|---|---|----------------------------|
| 1500 | 50,5-52,5 | 1520 | - | - | 53,7 kW (73 PS) / n = 3010 |
| 1400 | 52,5-54,5 | 1420 | - | - | 56,0 kW (76 PS) / n = 2800 |
| 1325 | 53,5-55,5 | 1340 | - | - | 57,4 kW (78 PS) / n = 2650 |
| 1250 | 52,5-54,5 | 1270 | - | - | 56,0 kW (76 PS) / n = 2500 |
| 1150 | 55,5-57,5 | 1170 | - | - | 58,1 kW (79 PS) / n = 2300 |
| 1150 | 50,0-52,0 | 1170 | - | - | 53,7 kW (73 PS) / n = 2300 |
| 1075 | 53,5-55,5 | 1090 | - | - | 55,2 kW (75 PS) / n = 2150 |
| 1075 | 49,5-51,5 | 1090 | - | - | 51,5 kW (70 PS) / n = 2150 |
| 1000 | 58,0-60,0 | 1010 | - | - | 55,0 kW / n = 2000         |
| 1000 | 53,0-55,0 | 1015 | - | - | 52,3 kW (71 PS) / n = 2000 |
| 1000 | 48,0-50,0 | 1015 | - | - | 48,6 kW (66 PS) / n = 2000 |
| 930  | 54,5-56,5 | 910  | - | - | 47,8 kW (65 PS) / n = 1800 |
| 900  | 49,0-51,0 | 910  | - | - | 44,9 kW (61 PS) / n = 1800 |
| 860  | 49,5-51,5 | 870  | - | - | 43,4 kW (59 PS) / n = 1725 |
| 750  | 58,5-60,5 | 760  | - | - | 42,0 kW / n = 1500         |
| 750  | 54,0-56,0 | 760  | - | - | 39,7 kW (54 PS) / n = 1500 |
| 750  | 52,5-54,5 | 760  | - | - | 39,0 kW / n = 1500         |
| 750  | 47,0-49,0 | 760  | - | - | 36,0 kW / n = 1500         |
| 750  | 44,0-46,0 | 760  | - | - | 34,6 kW (47 PS) / n = 1500 |
| 750  | 42,0-44,0 | 760  | - | - | 34,0 kW / n = 1500         |

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# C. Settings for Fuel Injection Pump with Fitted Governor

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|  |                                    |   |              |   |  |                                       |
|--|------------------------------------|---|--------------|---|--|---------------------------------------|
| <b>(2b)</b> Full-load stop<br>Test oil temp 40°C (104°F) |                                    | <b>(6)</b> Rotational-speed limit<br>Note changed to )<br>rev/min |              | <b>(3a)</b> Fuel delivery characteristics |  | Output and speed<br>- ..PS / ..U/min. |
| rev/min<br>1   | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3  | rev/min<br>4 | cm <sup>3</sup> /1000 strokes<br>5        |  |                                       |

F 6 L 912 - PES 6 A 80 D 410/3 RS 2273, 2348 (F- or B power output)

|      |           |      |     |           |                 |             |
|------|-----------|------|-----|-----------|-----------------|-------------|
| 1450 | 52,0-54,0 | 1470 | 800 | 33,5-36,5 | 70,0 kW         | / n = 2900  |
| 1400 | 64,0-66,0 | -    | 675 | 56,5-59,5 | 88,3 kW (120PS) | / n = 2800* |
| 1400 | 64,0-66,0 | 1420 | 800 | 53,5-56,5 | 88,3 kW (120PS) | / n = 2800  |
| 1400 | 57,0-59,0 | 1420 | 800 | 45,0-48,0 | 78,0 kW         | / n = 2800  |
| 1375 | 63,5-65,5 | 1390 | 800 | 52,5-55,5 | 85,4 kW (116PS) | / n = 2750  |
| 1375 | 60,5-62,5 | 1390 | 800 | 48,5-51,5 | 81,0 kW (110PS) | / n = 2750  |
| 1325 | 64,5-66,5 | 1345 | -   | -         | 87,0 kW         | / n = 2650  |
| 1250 | 62,0-64,0 | 1270 | 800 | 52,5-55,5 | 82,4 kW (112PS) | / n = 2500  |
| 1250 | 61,0-63,0 | 1270 | 800 | 50,0-53,0 | 81,0 kW (110PS) | / n = 2500  |
| 1250 | 59,0-61,0 | 1270 | 800 | 48,5-51,5 | 78,0 kW (106PS) | / n = 2500  |
| 1250 | 58,0-60,0 | 1270 | -   | -         | 78,0 kW         | / n = 2500  |
| 1200 | 59,5-61,5 | 1220 | 800 | 51,5-54,5 | 79,5 kW (108PS) | / n = 2400  |
| 1200 | 55,0-57,0 | 1220 | 800 | 50,0-53,0 | 74,3 kW         | / n = 2400  |
| 1150 | 58,0-60,0 | 1170 | -   | 54,0-57,0 | 78,0 kW (106PS) | / n = 2300  |
| 1150 | 56,0-58,0 | 1170 | 775 | 53,0-56,0 | 75,1 kW (102PS) | / n = 2300  |
| 1150 | 55,0-57,0 | 1170 | 800 | 52,0-55,0 | 74,0 kW         | / n = 2300  |
| 1100 | 55,0-57,0 | 1120 | 775 | 53,5-56,5 | 73,6 kW (100PS) | / n = 2200  |
| 1075 | 55,0-57,0 | 1090 | 775 | 53,5-56,5 | 73,6 kW (100PS) | / n = 2150  |
| 1075 | 53,0-55,0 | 1090 | 775 | 50,0-53,0 | 69,9 kW (95PS)  | / n = 2150  |
| 1000 | 48,5-50,5 | 1020 | 800 | 48,5-51,5 | 66,0 kW         | / n = 2000  |
| 900  | 47,5-49,5 | 920  | 600 | 48,0-51,0 | 44,0 kW         | / n = 1800  |
| 750  | 50,5-52,5 | 770  | -   | -         | 51,0 kW         | / n = 1500  |

1CXN power output (10% above rated output)

|     |           |     |   |   |                |            |
|-----|-----------|-----|---|---|----------------|------------|
| 900 | 45,0-47,0 | 910 | - | - | 54,5 kW (+10%) | / n = 1800 |
| 750 | 58,0-60,0 | 760 | - | - | 51,0 kW (+10%) | / n = 1500 |
| 750 | 54,5-56,5 | 760 | - | - | 48,0 kW (+10%) | / n = 1500 |
| 750 | 50,5-52,5 | 760 | - | - | 44,0 kW (+10%) | / n = 1500 |
| 750 | 39,5-41,5 | 760 | - | - | 39,0 kW (+10%) | / n = 1500 |

15N-power output (5% above rated output)

|     |           |     |   |   |               |            |
|-----|-----------|-----|---|---|---------------|------------|
| 900 | 54,4-56,5 | 910 | - | - | 63,0 kW (+5%) | / n = 1800 |
| 750 | 52,0-54,0 | 760 | - | - | 50,0 kW (+5%) | / n = 1500 |

\* valid for pump combinations with RQ governor

# C. Settings for Fuel Injection Pump with Fitted Governor

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| <b>(2b) Full-load stop</b><br>Test oil temp 40°C (104°F)<br>rev/min   cm <sup>3</sup> /1000 strokes<br>1   2 |  | <b>(6) Rotational speed limit</b><br>Note changed to )<br>rev/min<br>3 | <b>(3a) Fuel delivery characteristics</b><br>rev/min   cm <sup>3</sup> /1000 strokes<br>4   5 |  | Output and speed<br>- ..PS / ..U/min. |
|--|--|--|---|--|---------------------------------------|
|--|--|--|---|--|---------------------------------------|

F6L912 - PES 6 A 75 D 410/3 RS 1197 (F-or B-power output)

|      |           |      |     |           |                             |
|------|-----------|------|-----|-----------|-----------------------------|
| 1500 | 56,0-58,0 | 1520 | 800 | 40,5-43,5 | 76,5 kW (104 PS) / n = 3000 |
| 1500 | 55,0-57,0 | 1520 | 800 | 37,0-40,0 | 73,6 kW (100 PS) / n = 3000 |
| 1500 | 51,0-53,0 | 1520 | 800 | 35,0-38,0 | 69,2 kW ( 94 PS) / n = 3000 |
| 1400 | 57,5-59,5 | 1420 | 800 | 50,5-53,5 | 81,0 kW (110 PS) / n = 2800 |
| 1325 | 51,5-53,5 | 1345 | 800 | 45,0-48,0 | 73,5 kW / n = 2650          |
| 1250 | 53,0-55,0 | 1270 | 800 | 51,0-54,0 | 76,0 kW / n = 2500          |
| 1250 | 51,5-53,5 | 1270 | 800 | 50,5-53,5 | 74,0 kW / n = 2500          |
| 1250 | 49,0-51,0 | 1270 | 800 | 48,5-51,5 | 69,0 kW / n = 2500          |
| 1200 | 51,0-53,0 | 1220 | 750 | 52,0-55,0 | 74,0 kW / n = 2400          |
| 1150 | 50,0-52,0 | 1170 | 775 | 52,0-55,0 | 74,0 kW / n = 2300          |
| 1050 | 42,0-44,0 | 1065 | 775 | 39,5-42,5 | 58,9 kW ( 80 PS) / n = 2100 |
| 1000 | 50,5-52,5 | 1015 | 775 | 55,5-58,5 | 69,9 kW ( 95 PS) / n = 2000 |
| 1000 | 46,0-48,0 | 1015 | 775 | 51,5-54,5 | 66,2 kW ( 90 PS) / n = 2000 |
| 1000 | 44,5-46,5 | 1020 | 775 | 48,5-51,5 | 62,5 kW / n = 2000          |
| 1000 | 36,0-38,0 | 1020 | 800 | 33,0-36,0 | 46,0 kW / n = 2000          |
| 975  | 48,5-50,5 | 985  | 775 | 52,5-55,5 | 66,2 kW ( 90 PS) / n = 1950 |
| 950  | 51,5-53,5 | 970  | 775 | 55,0-58,0 | 67,0 kW / n = 1900          |
| 950  | 45,5-47,5 | 970  | 800 | 48,0-51,0 | 61,0 kW / n = 1900          |
| 950  | 42,0-44,0 | 960  | 775 | 42,0-45,0 | 56,7 kW ( 77 PS) / n = 1900 |
| 950  | 37,5-39,5 | 970  | 775 | 37,0-40,0 | 50,0 kW / n = 1900          |
| 900  | 53,5-55,5 | 910  | 775 | 54,5-57,5 | 64,0 kW ( 87 PS) / n = 1800 |
| 900  | 49,0-51,0 | 910  | 775 | 50,5-53,5 | 60,4 kW ( 82 PS) / n = 1800 |
| 900  | 41,0-43,5 | 920  | 800 | 43,0-46,0 | 54,0 kW / n = 1800          |
| 800  | 46,0-48,0 | 810  | -   | -         | 50,8 kW ( 69 PS) / n = 1600 |
| 750  | 55,5-57,5 | 760  | -   | -         | 53,7 kW ( 73 PS) / n = 1500 |
| 750  | 51,0-53,0 | 760  | -   | -         | 50,8 kW ( 69 PS) / n = 1500 |
| 750  | 47,0-49,0 | 760  | -   | -         | 47,8 kW ( 65 PS) / n = 1500 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| <b>(2b)</b> Full-load stop<br>Test oil temp 40°C (104°F)<br>rev/min   cm³/1000 strokes<br>1   2 |           | <b>(6)</b> Rotational speed limit<br>Note changed to )<br>rev/min<br>3 |   | <b>(3a)</b> Fuel delivery characteristics<br>rev/min   cm³/1000 strokes<br>4   5 |                 | Output and speed<br>- ..PS / ..U/min. |  |
|---|-----------|--|---|--|-----------------|---------------------------------------|--|
| F6L912 - PES 6 A 75 D 410/3 RS 1197,1326 ICXN power output (10% above rated output)             |           |  |   |  |                 |                                       |  |
| 1500  | 52,5-54,5 | 1520   | - | -  | 64,8 kW (88 PS) | / n = 3000                            |  |
| 1400  | 53,5-55,5 | 1420   | - | -  | 67,7 kW (92 PS) | / n = 2800                            |  |
| 1325  | 53,5-55,5 | 1340   | - | -  | 69,2 kW (94 PS) | / n = 2600                            |  |
| 1250  | 51,0-53,0 | 1270   | - | -  | 67,0 kW (91 PS) | / n = 2500                            |  |
| 1150  | 52,5-54,5 | 1170   | - | -  | 69,9 kW (95 PS) | / n = 2300                            |  |
| 1150  | 49,0-51,0 | 1170   | - | -  | 64,8 kW (88 PS) | / n = 2300                            |  |
| 1100  | 45,0-47,0 | 1120   | - | -  | 58,9 kW (80 PS) | / n = 2200                            |  |
| 1075  | 49,5-51,5 | 1090   | - | -  | 66,2 kW (90 PS) | / n = 2150                            |  |
| 1075  | 47,0-49,0 | 1090   | - | -  | 62,6 kW (85 PS) | / n = 2150                            |  |
| 1000  | 50,5-52,5 | 1020   | - | -  | 63,0 kW         | / n = 2000                            |  |
| 1000  | 45,0-47,0 | 1015   | - | -  | 58,9 kW (78 PS) | / n = 2000                            |  |
| 900   | 52,0-54,0 | 910  | - | -  | 57,4 kW (78 PS) | / n = 1800                            |  |
| 900   | 47,5-49,5 | 910  | - | -  | 53,7 kW (73 PS) | / n = 1800                            |  |
| 875   | 46,5-48,5 | 885  | - | -  | 51,5 kW (70 PS) | / n = 1750                            |  |
| 750   | 53,5-55,5 | 760  | - | -  | 47,8 kW (65 PS) | / n = 1500                            |  |
| 750   | 49,0-51,0 | 760  | - | -  | 44,9 kW (61 PS) | / n = 1500                            |  |

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# C. Settings for Fuel Injection Pump with Fitted Governor

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| 2b Full-load stop<br>Test oil temp 40°C (104°F) |                                    | 6 Rotational speed limit<br>Note changed to )<br>rev/min |  | 3a Fuel delivery characteristics |                                    | Output and speed<br>- ..PS / ..U/min. |
|---|------------------------------------|--|--|----------------------------------|------------------------------------|---------------------------------------|
| rev/min<br>1                                    | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3   |  | rev/min<br>4                     | cm <sup>3</sup> /1000 strokes<br>5 |                                       |

9F6L912 - PES 6 A 85 D 410/3 RS 2278,2348 (F-power output)

|      |           |      |     |           |                             |
|------|-----------|------|-----|-----------|-----------------------------|
| 1400 | 76,5-78,5 | 1420 | 800 | 69,5-72,5 | 103,0 kW (140PS) / n = 2800 |
| 1400 | 73,0-75,0 | 1420 | 800 | 61,5-64,5 | 95,7 kW (130PS) / n = 2800  |
| 1400 | 70,0-72,0 | 1420 | 800 | 52,5-55,5 | 88,3 kW (120PS) / n = 2800  |
| 1325 | 76,5-78,5 | 1340 | 800 | 74,5-77,5 | 103,0 kW (140PS) / n = 2650 |
| 1325 | 73,5-75,5 | 1340 | 800 | 64,5-67,5 | 95,7 kW (130PS) / n = 2650  |
| 1325 | 70,0-72,0 | 1340 | 800 | 56,5-59,5 | 88,3 kW (120PS) / n = 2650  |
| 1325 | 66,0-68,0 | 1340 | 800 | 47,5-50,5 | 81,0 kW (110PS) / n = 2650  |
| 1250 | 76,5-78,5 | 1270 | 800 | 77,5-80,5 | 103,0 kW (140PS) / n = 2500 |
| 1250 | 73,0-75,0 | 1270 | 800 | 69,5-72,5 | 95,7 kW (130PS) / n = 2500  |
| 1250 | 69,5-71,5 | 1270 | 800 | 60,5-63,5 | 88,3 kW (120PS) / n = 2500  |
| 1200 | 73,0-75,0 | 1250 | 800 | 75,5-78,5 | 99,4 kW (135PS) / n = 2400  |
| 1200 | 69,0-71,0 | 1220 | 800 | 61,5-64,5 | 88,3 kW (120PS) / n = 2400  |
| 1150 | 72,0-74,0 | 1170 | 775 | 76,5-79,5 | 95,7 kW (130PS) / n = 2300  |
| 1150 | 68,0-70,0 | 1170 | 775 | 67,5-70,5 | 88,3 kW (120PS) / n = 2300  |
| 1150 | 63,0-65,0 | 1170 | 775 | 58,5-61,5 | 81,0 kW (110PS) / n = 2300  |
| 1100 | 68,0-70,0 | 1120 | 775 | 75,5-78,5 | 92,0 kW (125PS) / n = 2200  |
| 1075 | 64,0-66,0 | 1090 | 775 | 67,5-70,5 | 84,0 kW (115PS) / n = 2150  |
| 1075 | 62,0-64,0 | 1090 | 775 | 62,5-65,5 | 81,0 kW (110PS) / n = 2150  |
| 1050 | 59,0-60,5 | 1065 | 775 | 58,5-61,5 | 76,5 kW (104PS) / n = 2100  |
| 1000 | 62,0-64,0 | 1015 | 775 | 69,5-72,5 | 59,6 kW (110PS) / n = 2000  |
| 1000 | 59,0-61,0 | 1015 | 775 | 62,5-65,5 | 76,5 kW (104PS) / n = 2000  |
| 900  | 60,0-62,0 | 910  | 775 | 66,5-69,5 | 73,6 kW (100PS) / n = 1800  |
| 900  | 56,5-58,5 | 910  | 775 | 61,5-64,5 | 69,9 kW ( 95PS) / n = 1800  |
| 875  | 58,5-61,0 | 885  | 775 | 62,5-65,5 | 69,9 kW ( 95PS) / n = 1750  |
| 750  | 63,0-65,0 | 760  | -   | -         | 61,1 kW ( 83PS) / n = 1500  |
| 750  | 59,0-61,0 | 760  | -   | -         | 59,0 kW ( 80PS) / n = 1500  |

ICXN power output (10% above rated output)

|      |           |      |   |   |                            |
|------|-----------|------|---|---|----------------------------|
| 1150 | 68,0-70,0 | 1170 | - | - | 81,0 kW (110PS) / n = 2300 |
| 1075 | 64,0-66,0 | 1090 | - | - | 77,3 kW (105PS) / n = 2150 |
| 1000 | 61,5-63,5 | 1015 | - | - | 73,6 kW (100PS) / n = 2000 |
| 900  | 59,0-61,0 | 910  | - | - | 66,2 kW ( 90PS) / n = 1800 |
| 900  | 47,0-49,0 | 910  | - | - | 55,9 kW ( 76PS) / n = 1800 |
| 750  | 63,0-65,0 | 760  | - | - | 55,9 kW ( 76PS) / n = 1500 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

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| <b>2b</b> Full-load stop<br>Test oil temp 40°C (104°F)<br>rev/min 1      cm <sup>3</sup> /1000 strokes 2 |           | <b>6</b> Rotational speed limit<br>Note changed to 1<br>rev/min 3 |     | <b>3a</b> Fuel delivery characteristics<br>rev/min 4      cm <sup>3</sup> /1000 strokes 5 |                  | Output and speed<br>- ..PS / ..U/min. |
|--|-----------|---|-----|---|------------------|---------------------------------------|
| F3L912 W - PES 3 A 75 D 410/3 RS 1183 (F-power output)   |           |   |     |   |                  |                                       |
| 1400   | 61,0-63,0 | 1420  | 800 | 53,0-56,0   | 36,8 kW (50 PS)  | / n = 2800                            |
| 1400   | 57,5-59,5 | 1420  | 800 | 50,0-53,0   | 34,6 kW (47 PS)  | / n = 2800                            |
| 1325   | 59,0-61,0 | 1340  | 800 | 53,0-56,0   | 35,3 kW (48 PS)  | / n = 2650                            |
| 1325   | 57,0-59,0 | 1340  | 800 | 50,5-53,5   | 33,9 kW (46 PS)  | / n = 2650                            |
| 1250   | 58,5-60,5 | 1270  | 800 | 54,0-57,0   | 42,0 kW (57 PS)  | / n = 2500                            |
| 1250   | 56,5-58,5 | 1270  | 800 | 51,5-54,5   | 33,1 kW (45 PS)  | / n = 2500                            |
| 1250   | 53,5-55,5 | 1270  | 775 | 50,5-53,5   | 32,0 kW          | / n = 2500                            |
| 1250   | 51,5-53,5 | 1270  | 800 | 46,0-49,0   | 29,4 kW (40 PS)  | / n = 2500                            |
| 1250   | 49,5-51,5 | 1270  | 800 | 44,0-47,0   | 28,0 kW (38 PS)  | / n = 2500                            |
| 1250   | 41,0-43,0 | 1270  | 775 | 34,0-37,0   | 20,0 kW          | / n = 2500                            |
| 1150   | 57,0-59,0 | 1170  | 775 | 54,0-57,0   | 32,4 kW (44 PS)  | / n = 2300                            |
| 1150   | 53,5-55,5 | 1170  | 775 | 50,0-53,0   | 30,2 kW (41 PS)  | / n = 2300                            |
| 1150   | 49,5-51,5 | 1170  | 775 | 44,5-47,5   | 26,9 kW (36,5PS) | / n = 2300                            |
| 1100   | 48,5-50,5 | 1120  | 775 | 44,0-47,0   | 25,8 kW (35 PS)  | / n = 2200                            |
| 1075   | 55,0-57,0 | 1090  | 775 | 53,0-56,0   | 30,2 kW (41 PS)  | / n = 2150                            |
| 1075   | 53,0-55,0 | 1090  | 775 | 50,0-53,0   | 28,7 kW (39 PS)  | / n = 2150                            |
| 1075   | 49,0-51,0 | 1090  | 775 | 44,5-47,5   | 25,8 kW (35 PS)  | / n = 2150                            |
| 1050   | 50,0-52,0 | 1090  | 775 | 47,0-50,0   | 26,5 kW (36 PS)  | / n = 2100                            |
| 1000   | 54,5-56,5 | 1015  | 775 | 53,5-56,5   | 28,7 kW (39 PS)  | / n = 2000                            |
| 1000   | 50,0-52,0 | 1015  | 775 | 47,5-50,5   | 26,8 kW (35 PS)  | / n = 2000                            |
| 900  | 53,0-55,0 | 910   | 775 | 44,0-47,0   | 26,1 kW (35,5PS) | / n = 1800                            |
| 900  | 51,5-53,5 | 910   | 775 | 50,5-53,5   | 25,0 kW (34 PS)  | / n = 1800                            |
| 900  | 48,5-50,5 | 910   | 775 | 47,0-50,0   | 23,6 kW (32 PS)  | / n = 1800                            |
| 750  | 52,5-54,5 | 760   | -   | -   | 22,1 kW (30 PS)  | / n = 1500                            |
| 750  | 47,0-49,0 | 760   | -   | -   | 19,9 kW (27 PS)  | / n = 1500                            |

## ICXN power output (10% above rated output)

|      |           |      |   |   |                            |
|------|-----------|------|---|---|----------------------------|
| 1150 | 54,5-56,5 | 1170 | - | - | 28,7 kW (39 PS) / n = 2300 |
| 1150 | 49,5-51,5 | 1170 | - | - | 25,0 kW (34 PS) / n = 2300 |
| 1075 | 54,0-56,0 | 1090 | - | - | 27,2 kW (37 PS) / n = 2150 |
| 1075 | 49,5-51,5 | 1090 | - | - | 24,3 kW (33 PS) / n = 2150 |
| 1000 | 53,0-55,0 | 1015 | - | - | 25,8 kW (35 PS) / n = 2000 |
| 1000 | 49,5-51,5 | 1015 | - | - | 23,6 kW (32 PS) / n = 2000 |
| 900  | 52,5-54,5 | 910  | - | - | 23,6 kW (32 PS) / n = 1800 |
| 900  | 48,0-50,0 | 910  | - | - | 21,3 kW (29 PS) / n = 1800 |
| 750  | 54,5-56,5 | 760  | - | - | 21,0 kW / n = 1500         |
| 750  | 51,0-53,0 | 760  | - | - | 19,9 kW (27 PS) / n = 1500 |
| 750  | 45,4-47,5 | 760  | - | - | 17,7 kW (24 PS) / n = 1500 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

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| 2b Full-load stop<br>Test oil temp 40°C (104°F) |                               | 6 Rotational speed limit<br>Note changed to )<br>rev/min |  | 3a Fuel delivery characteristics |                               | Output and speed<br>- ..PS / ..U/min. |
|---|-------------------------------|--|--|----------------------------------|-------------------------------|---------------------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes |  |  | rev/min                          | cm <sup>3</sup> /1000 strokes |                                       |
| 1   | 2                             | 3  |  | 4                                | 5                             |                                       |

F4L912 W - PES 4 A 75 D 410/3 RS 1183 (F power output)

|      |           |      |     |           |                             |
|------|-----------|------|-----|-----------|-----------------------------|
| 1400 | 58,5-60,5 | 1420 | 800 | 52,0-55,0 | 49,3 kW (67 PS) / n = 2800  |
| 1400 | 55,0-57,0 | 1420 | 800 | 48,5-51,5 | 46,4 kW (63 PS) / n = 2800  |
| 1325 | 56,0-58,0 | 1340 | 800 | 51,0-54,0 | 47,1 kW (64 PS) / n = 2650  |
| 1325 | 53,5-55,5 | 1340 | 800 | 48,5-51,5 | 44,9 kW (61 PS) / n = 2650  |
| 1300 | 53,0-55,0 | 1320 | 800 | 48,5-51,5 | 44,2 kW (60 PS) / n = 2600  |
| 1250 | 55,0-57,0 | 1270 | 800 | 52,0-55,0 | 45,6 kW (62 PS) / n = 2500  |
| 1250 | 53,5-55,5 | 1270 | 775 | 50,5-53,5 | 44,0 kW / n = 2500          |
| 1250 | 52,5-54,5 | 1270 | 800 | 48,5-51,5 | 42,7 kW (58 PS) / n = 2500  |
| 1250 | 49,5-51,5 | 1270 | 800 | 45,0-48,0 | 39,7 kW (54 PS) / n = 2500  |
| 1250 | 49,5-51,5 | 1270 | 775 | 47,5-50,5 | 38,0 kW / n = 2500          |
| 1250 | 49,0-50,0 | 1270 | 800 | 46,5-49,5 | 38,0 kW (51 PS) / n = 2500  |
| 1150 | 54,5-56,5 | 1170 | 775 | 52,5-55,5 | 43,4 kW (59 PS) / n = 2300  |
| 1150 | 51,5-53,5 | 1170 | 775 | 48,5-51,5 | 40,5 kW (55 PS) / n = 2300  |
| 1150 | 50,5-52,5 | 1170 | 775 | 47,5-50,5 | 39,4 kW (53,5PS) / n = 2300 |
| 1150 | 47,5-49,5 | 1170 | 775 | 44,0-47,0 | 36,1 kW (49 PS) / n = 2300  |
| 1150 | 46,5-48,5 | 1170 | 775 | 43,0-46,0 | 35,0 kW / n = 2300          |
| 1100 | 46,5-48,5 | 1120 | 775 | 44,0-47,0 | 34,6 kW (47 PS) / n = 2200  |
| 1100 | 44,5-46,5 | 1120 | 775 | 41,0-44,0 | 32,4 kW (44 PS) / n = 2200  |
| 1075 | 52,0-54,0 | 1090 | 775 | 50,0-53,0 | 39,7 kW (54 PS) / n = 2150  |
| 1075 | 50,5-52,5 | 1090 | 775 | 48,5-51,5 | 38,3 kW (52 PS) / n = 2150  |
| 1075 | 46,5-48,5 | 1090 | 775 | 44,0-47,0 | 34,2 kW (46,5PS) / n = 2150 |
| 1000 | 52,0-54,0 | 1015 | 775 | 52,0-55,0 | 38,3 kW (52 PS) / n = 2000  |
| 1000 | 49,5-51,5 | 1015 | 775 | 48,5-51,5 | 36,1 kW (49 PS) / n = 2000  |
| 1000 | 46,5-48,5 | 1015 | 775 | 44,5-47,5 | 33,1 kW (45 PS) / n = 2000  |
| 900  | 51,0-53,0 | 910  | 775 | 50,0-53,0 | 34,6 kW (47 PS) / n = 1800  |
| 900  | 47,5-49,5 | 910  | 775 | 47,0-50,0 | 31,6 kW (43 PS) / n = 1800  |
| 900  | 45,5-47,5 | 910  | 775 | 44,5-47,5 | 30,5 kW (41,5PS) / n = 1800 |
| 750  | 51,0-53,0 | 760  | -   | -         | 29,4 kW (40 PS) / n = 1500  |
| 750  | 47,5-49,5 | 760  | -   | -         | 27,2 kW (37 PS) / n = 1500  |
| 750  | 45,0-47,0 | 760  | -   | -         | 25,8 kW (35 PS) / n = 1500  |

ICXN power output (10% above rated output)

|      |           |      |   |   |                             |
|------|-----------|------|---|---|-----------------------------|
| 1200 | 48,5-50,5 | 1220 | - | - | 34,2 kW (46,5PS) / n = 2400 |
| 1150 | 52,5-54,5 | 1170 | - | - | 38,3 kW (52 PS) / n = 2300  |
| 1150 | 47,0-49,0 | 1170 | - | - | 33,1 kW (45 PS) / n = 2300  |
| 1075 | 51,5-53,5 | 1090 | - | - | 36,1 kW (49 PS) / n = 2150  |
| 1075 | 47,5-49,5 | 1090 | - | - | 32,4 kW (44 PS) / n = 2150  |
| 1000 | 51,0-53,0 | 1015 | - | - | 34,6 kW (47 PS) / n = 2000  |
| 1000 | 47,5-49,5 | 1015 | - | - | 31,6 kW (43 PS) / n = 2000  |
| 900  | 51,0-53,0 | 910  | - | - | 31,6 kW (43 PS) / n = 1800  |
| 900  | 46,5-48,5 | 910  | - | - | 28,7 kW (39 PS) / n = 1800  |
| 750  | 50,0-52,0 | 760  | - | - | 26,5 kW (36 PS) / n = 1500  |
| 750  | 44,5-46,5 | 760  | - | - | 23,6 kW (32 PS) / n = 1500  |

**Testoil-ISO 4113**

# C. Settings for Fuel Injection Pump with Fitted Governor

-31-

| (2b) Full-load stop<br>Test oil temp 40°C (104°F) |                               | (6) Rotational speed limit<br>Note changed to )<br>rev/min | (3a) Fuel delivery characteristics |                               | Output and speed<br>- ..PS / ..U/min. |
|---|-------------------------------|--|------------------------------------|-------------------------------|---------------------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | 3  | rev/min                            | cm <sup>3</sup> /1000 strokes |                                       |
| 1   | 2                             |  | 4                                  | 5                             |                                       |

F5L912 W - PES 5 A 80 D 410/3 RS 2347 (F-power output)

|      |           |      |     |           |                            |
|------|-----------|------|-----|-----------|----------------------------|
| 1400 | 56,0-58,0 | 1420 | 800 | 50,5-53,5 | 61,1 kW (83 PS) / n = 2800 |
| 1400 | 53,0-55,0 | 1420 | 800 | 48,5-51,5 | 58,1 kW (79 PS) / n = 2800 |
| 1325 | 55,0-57,0 | 1340 | 800 | 50,5-53,5 | 58,9 kW (80 PS) / n = 2650 |
| 1325 | 53,0-55,0 | 1340 | 800 | 48,5-51,5 | 56,7 kW (77 PS) / n = 2650 |
| 1325 | 42,0-44,0 | 1345 | 800 | 36,5-39,5 | 41,0 kW / n = 2650         |
| 1250 | 55,0-57,0 | 1270 | 800 | 51,0-54,0 | 57,4 kW (78 PS) / n = 2500 |
| 1250 | 53,0-55,0 | 1270 | 800 | 49,5-52,5 | 55,2 kW (75 PS) / n = 2500 |
| 1250 | 49,5-51,5 | 1270 | 800 | 46,5-49,5 | 51,5 kW (70 PS) / n = 2500 |
| 1250 | 46,0-48,0 | 1270 | 800 | 42,0-45,0 | 46,4 kW (63 PS) / n = 2500 |
| 1200 | 54,0-56,0 | 1220 | 800 | 51,5-54,5 | 55,9 kW (76 PS) / n = 2400 |
| 1200 | 51,5-53,5 | 1220 | 800 | 48,5-51,5 | 53,0 kW (72 PS) / n = 2400 |
| 1150 | 53,5-55,5 | 1170 | 775 | 51,5-54,5 | 54,5 kW (74 PS) / n = 2300 |
| 1150 | 51,0-53,0 | 1170 | 775 | 51,5-54,5 | 52,0 kW / n = 2300         |
| 1150 | 50,0-52,0 | 1170 | 775 | 48,0-51,0 | 50,0 kW (68 PS) / n = 2300 |
| 1150 | 47,5-49,5 | 1170 | 775 | 45,5-48,5 | 47,1 kW (64 PS) / n = 2300 |
| 1150 | 46,0-48,0 | 1170 | 775 | 43,5-46,5 | 44,9 kW (61 PS) / n = 2300 |
| 1150 | 45,0-47,0 | 1170 | 775 | 43,0-47,0 | 44,0 kW / n = 2300         |
| 1150 | 44,5-46,5 | 1170 | 775 | 42,5-45,5 | 43,0 kW / n = 2300         |
| 1150 | 43,5-45,5 | 1170 | 775 | 42,0-45,0 | 41,5 kW / n = 2300         |
| 1150 | 42,0-44,0 | 1170 | 775 | 40,0-43,0 | 40,0 kW / n = 2300         |
| 1150 | 41,5-43,5 | 1170 | 775 | 39,0-42,0 | 39,0 kW / n = 2300         |
| 1150 | 40,5-42,5 | 1170 | 775 | 37,0-40,0 | 37,0 kW / n = 2300         |
| 1075 | 51,0-53,0 | 1090 | 775 | 49,5-52,5 | 50,0 kW (68 PS) / n = 2150 |
| 1075 | 49,5-51,5 | 1090 | 775 | 48,0-51,0 | 47,8 kW (65 PS) / n = 2150 |
| 1075 | 45,5-47,5 | 1090 | 775 | 43,5-46,5 | 42,7 kW (58 PS) / n = 2150 |
| 1000 | 50,5-52,5 | 1015 | 775 | 51,0-54,0 | 47,8 kW (65 PS) / n = 2000 |
| 1000 | 49,0-51,0 | 1015 | 775 | 48,5-51,5 | 45,6 kW (62 PS) / n = 2000 |
| 1000 | 45,0-47,0 | 1015 | 775 | 44,5-47,5 | 41,2 kW (56 PS) / n = 2000 |
| 900  | 50,0-52,0 | 910  | 775 | 49,5-52,5 | 43,4 kW (59 PS) / n = 1800 |
| 900  | 48,5-50,5 | 910  | 775 | 48,5-51,5 | 42,0 kW (57 PS) / n = 1800 |
| 900  | 45,0-47,0 | 910  | 775 | 44,5-47,5 | 38,3 kW (52 PS) / n = 1800 |
| 750  | 50,5-52,5 | 760  | -   | -         | 36,8 kW (50 PS) / n = 1500 |
| 750  | 46,5-48,5 | 760  | -   | -         | 33,9 kW (46 PS) / n = 1500 |
| 750  | 44,5-46,5 | 760  | -   | -         | 32,4 kW (44 PS) / n = 1500 |

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

-32-

| <div> <div>2b</div> <div>Full-load stop</div> </div> |   | <div> <div>6</div> <div>Rotational speed limit</div> </div> | <div> <div>3a</div> <div>Fuel delivery characteristics</div> </div> |                  | Output and speed<br>- ..PS / ..U/min. |
|--|---|---|---|------------------|---------------------------------------|
| Test oil temp 40°C (104°F)                           |   | Note changed to )<br>rev/min                                | rev/min   | cm³/1000 strokes |                                       |
| 1  | 2 | 3   | 4   | 5                |                                       |

F5L912 W - PES 5 A 80 D 410/3 RS 2347 ICXN power output (10% above rated output)

|      |           |      |   |   |                            |
|------|-----------|------|---|---|----------------------------|
| 1150 | 51,0-53,0 | 1170 | - | - | 47,8 kW (65 PS) / n = 2300 |
| 1150 | 46,0-48,0 | 1170 | - | - | 42,0 kW (57 PS) / n = 2300 |
| 1075 | 50,5-52,5 | 1090 | - | - | 45,6 kW (62 PS) / n = 2150 |
| 1075 | 46,5-48,5 | 1090 | - | - | 40,5 kW (55 PS) / n = 2150 |
| 1000 | 49,0-51,0 | 1020 | - | - | 42,7 kW (58 PS) / n = 2000 |
| 1000 | 46,0-48,0 | 1015 | - | - | 39,0 kW (53 PS) / n = 2000 |
| 900  | 49,0-51,0 | 910  | - | - | 39,0 kW (53 PS) / n = 1800 |
| 900  | 45,0-47,0 | 910  | - | - | 35,3 kW (48 PS) / n = 1800 |
| 750  | 49,0-51,0 | 760  | - | - | 33,1 kW (45 PS) / n = 1500 |
| 750  | 44,0-46,0 | 760  | - | - | 29,4 kW (40 PS) / n = 1500 |

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

-33-

| <div> <div>2b</div> <div>Full-load stop</div> </div> <div> <div>Test oil temp 40°C (104°F)</div> <div>rev/min</div> <div>cm<sup>3</sup>/1000 strokes</div> </div> |           | <div> <div>6</div> <div>Rotational speed limit</div> </div> <div> <div>Note</div> <div>changed to )</div> <div>rev/min</div> </div> |     | <div> <div>3a</div> <div>Fuel delivery characteristics</div> </div> <div> <div>rev/min</div> <div>cm<sup>3</sup>/1000 strokes</div> </div> |                 | Output and speed  |
|---|-----------|---|-----|--|-----------------|-------------------|
| 1   | 2         | 3   | 4   | 5  |                 | - ..PS / ..U/min. |
| F6L912 W - PES 6 A 75 D 410/3 RS 1197,1326 (F-power output)   |           |   |     |  |                 |                   |
| 1400  | 56,5-58,5 | 1420  | 800 | 50,5-53,5  | 73,6 kW (100PS) | / n = 2800        |
| 1400  | 53,5-55,5 | 1420  | 800 | 48,5-51,5  | 69,2 kW (94PS)  | / n = 2800        |
| 1325  | 55,5-57,5 | 1340  | 800 | 50,5-53,5  | 70,7 kW (96PS)  | / n = 2650        |
| 1325  | 53,5-55,5 | 1340  | 800 | 48,5-51,5  | 67,7 kW (92PS)  | / n = 2650        |
| 1300  | 53,0-55,0 | 1320  | 800 | 48,5-51,5  | 67,0 kW (91PS)  | / n = 2600        |
| 1250  | 55,5-57,5 | 1270  | 800 | 51,5-54,5  | 69,2 kW (94PS)  | / n = 2500        |
| 1250  | 51,5-53,5 | 1270  | 800 | 47,5-50,5  | 63,3 kW (86PS)  | / n = 2500        |
| 1250  | 48,5-50,5 | 1270  | 800 | 44,5-47,5  | 58,9 kW (80PS)  | / n = 2500        |
| 1250  | 46,5-48,5 | 1270  | 800 | 42,5-45,5  | 56,0 kW (76PS)  | / n = 2500        |
| 1250  | 43,0-45,0 | 1270  | 775 | 40,5-43,5  | 50,0 kW ( )     | / n = 2500        |
| 1200  | 46,5-48,5 | 1220  | 800 | 42,5-45,5  | 54,5 kW (74PS)  | / n = 2400        |
| 1150  | 53,5-55,5 | 1170  | 775 | 51,5-54,5  | 64,8 kW (88PS)  | / n = 2300        |
| 1150  | 52,0-53,0 | 1170  | 775 | 52,0-54,0  | 63,0 kW ( )     | / n = 2300        |
| 1150  | 50,5-52,5 | 1170  | 775 | 48,0-51,0  | 60,4 kW (82PS)  | / n = 2300        |
| 1150  | 49,0-51,0 | 1170  | 775 | 47,7-50,5  | 58,9 kW (80PS)  | / n = 2300        |
| 1150  | 47,0-49,0 | 1170  | 775 | 46,0-49,0  | 55,0 kW ( )     | / n = 2300        |
| 1150  | 46,5-48,5 | 1170  | 775 | 43,0-46,0  | 53,7 kW (73PS)  | / n = 2300        |
| 1150  | 43,5-45,5 | 1170  | 775 | 39,5-42,5  | 49,3 kW (67PS)  | / n = 2300        |
| 1150  | 42,5-44,5 | 1170  | 775 | 39,5-42,5  | 48,0 kW ( )     | / n = 2300        |
| 1100  | 43,5-45,5 | 1120  | 775 | 40,5-43,5  | 48,6 kW (66PS)  | / n = 2200        |
| 1075  | 51,5-53,5 | 1090  | 775 | 50,5-53,5  | 60,4 kW (82PS)  | / n = 2150        |
| 1075  | 49,5-51,5 | 1090  | 775 | 48,0-51,0  | 57,4 kW (78PS)  | / n = 2150        |
| 1075  | 45,5-47,5 | 1090  | 775 | 43,0-46,0  | 51,5 kW (70PS)  | / n = 2150        |
| 1000  | 51,0-53,0 | 1015  | 775 | 51,0-54,0  | 57,4 kW (78PS)  | / n = 2000        |
| 1000  | 49,0-51,0 | 1015  | 775 | 48,5-51,5  | 54,5 kW (74PS)  | / n = 2000        |
| 1000  | 45,5-47,5 | 1015  | 775 | 44,5-47,5  | 49,3 kW (67PS)  | / n = 2000        |
| 900   | 50,5-52,5 | 910   | 775 | 50,5-53,5  | 52,3 kW (71PS)  | / n = 1800        |
| 900   | 48,5-50,5 | 910   | 775 | 48,0-51,0  | 50,0 kW (68PS)  | / n = 1800        |
| 900   | 45,5-47,5 | 920   | 775 | 45,5-48,5  | 47,0 kW ( )     | / n = 1800        |
| 900   | 45,0-47,0 | 910   | 775 | 44,5-47,5  | 45,6 kW (62PS)  | / n = 1800        |
| 900   | 42,0-44,0 | 920   | 775 | 41,0-44,0  | 42,5 kW ( )     | / n = 1800        |
| 750   | 50,5-52,5 | 760   | -   | -  | 44,2 kW (60PS)  | / n = 1500        |
| 750   | 45,5-47,5 | 760   | -   | -  | 39,7 kW (54PS)  | / n = 1500        |
| 750   | 44,5-46,5 | 760   | -   | -  | 38,3 kW (52PS)  | / n = 1500        |

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

-34-

| 2b Full-load stop          |                               | 3 Rotational speed limits |  | 3a Fuel delivery characteristics |                               | Output and speed<br>- ..PS / ..U/min. |
|----------------------------|-------------------------------|---------------------------|--|----------------------------------|-------------------------------|---------------------------------------|
| Test oil temp 40°C (104°F) |                               | Note changed to )         |  |                                  |                               |                                       |
| rev/min                    | cm <sup>3</sup> /1000 strokes | rev/min                   |  | rev/min                          | cm <sup>3</sup> /1000 strokes |                                       |
| 1                          | 2                             | 3                         |  | 4                                | 5                             |                                       |

F6L912W - PES 6 A 75 D 410/3 RS 1197,1326

ICXN power output (10% above rated output)

|      |           |      |   |   |                            |
|------|-----------|------|---|---|----------------------------|
| 1150 | 51,5-53,5 | 1170 | - | - | 57,4 kW (78 PS) / n = 2300 |
| 1150 | 46,5-48,5 | 1170 | - | - | 50,0 kW (68 PS) / n = 2300 |
| 1075 | 50,5-52,5 | 1090 | - | - | 54,5 kW (74 PS) / n = 2150 |
| 1075 | 46,5-48,5 | 1090 | - | - | 48,6 kW (66 PS) / n = 2150 |
| 1000 | 50,0-52,0 | 1015 | - | - | 51,5 kW (70 PS) / n = 2000 |
| 1000 | 46,5-48,5 | 1015 | - | - | 47,1 kW (64 PS) / n = 2000 |
| 900  | 49,5-51,5 | 910  | - | - | 47,1 kW (64 PS) / n = 1800 |
| 900  | 45,5-47,5 | 910  | - | - | 42,7 kW (58 PS) / n = 1800 |
| 750  | 49,5-51,5 | 760  | - | - | 39,7 kW (54 PS) / n = 1500 |
| 750  | 44,5-46,5 | 760  | - | - | 35,3 kW (48 PS) / n = 1500 |



# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 IHC 9,4a

2. Edition

En

PES 8 P 100 A 921/5 RS 286 RQV 325-1250 PA 445 KR

1-8-4-2-7-3-6-5 je 45° ±0,5° (±0,75°)

Values only apply to test nozzle-and-holder assembly 1 688 901 017  
and fuel-injection test tubing 9 681 230 713

Suction-gallery pressure 2,8 bar

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

supersedes

5.83

company:

IHC

engine:

DVT 573 B

Komb.-Nr.

0 402 058 045

## A. Fuel Injection Pump Settings

Port closing at prestroke  $\frac{2,7-2,8}{(2,65-2,85)}$  mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1250                             | 9,6-9,7                       | 10,9-11,1  | 0,4   |                               |  |  |
| 325                              | 5,0-5,1                       | 1,7-2,3  | 0,6   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in 

## B. Governor Settings

| Upper rated speed                          |  |  | Intermediate rated speed                   |              |                               | Lower rated speed                          |                       |                               | Sliding sleeve travel |          |
|--|--|--|--|--------------|-------------------------------|--|-----------------------|-------------------------------|-----------------------|----------|
| Degree of deflection of control lever<br>1 | rev/min<br>Control rod travel<br>mm<br>2 | Control rod travel<br>mm<br>rev/min<br>3 | Degree of deflection of control lever<br>4 | rev/min<br>5 | Control rod travel<br>mm<br>6 | Degree of deflection of control lever<br>7 | rev/min<br>8          | Control rod travel<br>mm<br>9 | rev/min<br>10         | mm<br>11 |
| ca. 60                                     | 8,6<br>4,0<br>1640                       | 1290-1300<br>1375-1405<br>0 - 1,0        | -  | -            | -                             | ca. 11<br>390-450<br>3a                    | 100<br>325<br>470-530 | 6,2-7,5<br>5,5-6,2            |                       |          |

Torque control travel a =  mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |   | Rotational-speed<br>limitation<br>intermediate speed ②b | Fuel delivery characteristics ⑤a |   | Starting fuel delivery<br>idle<br>switching point ⑥ |                                    | Torque-control<br>travel ⑤ |                                |
|---|---|---|----------------------------------|---|---|------------------------------------|----------------------------|--------------------------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2      | rev/min<br>3  | rev/min<br>4                     | cm <sup>3</sup> /1000 strokes<br>5      | rev/min<br>6  | cm <sup>3</sup> /1000 strokes<br>7 | rev/min<br>8               | Control rod travel<br>mm<br>9  |
| LDA<br>1250   | 0,8 bar<br>109,0-111,0<br>(107,0-113,0) | 1290-1300*  | LDA<br>900                       | 0,8 bar<br>115,0-121,0<br>(113,0-123,0) | 100<br>325  | min. 170,0<br>17,0-23,0            | 1250<br>900<br>700         | 9,5+0,1<br>10,0+0,1<br>9,8+0,1 |
|   |   |   | LDA<br>800                       | 0 bar<br>73,0-81,0<br>(71,0-83,0)       |   |                                    |                            |                                |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

5.06

# Test Specifications Fuel Injection Pumps (1A) and Governors

40

VDT-WPP 001/4

7. Edition

En

PES 4 A 85 D 420 LS 2459 EP/RSV 375-1100 A 2 B 649 DR

supersedes 16.9.70, 17.2.71  
comparCase 29.4.71  
engA301BD 15.2.72  
20.7.72  
24.11.72

Test with case overflow valve  
and regulator in accordance with special setting.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke

mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1100                             | 11,5                          | 7,3-7,4  | 0,3   |                               |  |  |
| 375                              | 7,2                           | 1,52-2,12  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

| ① Upper rated speed rev/min                |                               |                                       | Intermediate rated speed |   |   | ④ Lower rated speed                      |              |                               | ③ Torque control |                                |
|--|-------------------------------|---------------------------------------|--------------------------|---|---|--|--------------|-------------------------------|------------------|--------------------------------|
| Degree of deflection of control lever<br>1 | Control rod travel<br>mm<br>2 | Control rod travel<br>mm rev/min<br>3 | 4                        | 5 | 6 | Control lever deflection in degrees<br>7 | rev/min<br>8 | Control rod travel<br>mm<br>9 | rev/min<br>10    | Control rod travel<br>mm<br>11 |
| ca. 43                                     | 1140                          | 11,2-11,8                             | without auxiliary spring |   |   | ca. 22                                   | 375          | 7,2                           | 1100             | 0                              |
|  | 1150                          | 10,4-10,8                             |                          |   |   |  | 150          | 19 - 21                       | 900              | 0,3-0,4                        |
|  | 1160                          | 6,0- 7,4                              |                          |   |   |  | 375          | 7,0-7,4                       | 500              | 0,4-0,7                        |
|  | 1220                          | 2,2- 4,4                              |                          |   |   |  | 600          | 0 - 1                         |                  |                                |
|  | 1300                          | 0,3- 1                                |                          |   |   |  | 300          | 10,7-12,5                     |                  |                                |
| ②a   |                               |                                       |                          |   |   |  | 480          | 1,6- 4,4                      |                  |                                |

The numbers denote the sequence of the tests

## C. Settings for Fuel Injection Pump with Fitted Governor

| ②b Full-load stop          |                                    | ⑥ Rotational-speed limit   |            | ③a Fuel delivery characteristics |     | Starting fuel delivery idle |     | ④a Idle stop  |  |
|----------------------------|------------------------------------|----------------------------|------------|----------------------------------|-----|-----------------------------|-----|---------------|--|
| Test oil temp 40°C (104°F) |                                    | Note changed to<br>rev/min |            |                                  |     |                             |     |               |  |
| rev/min<br>1               | cm <sup>3</sup> /1000 strokes<br>2 | 3                          | 4          | 5                                | 6   | 7                           | 8   | 9             |  |
| 1100                       | 72,5-74,5<br>(71,5-75,5)           | 1140-1155*<br>(1135-1160)  | 750<br>650 | 74,5-78,5<br>max. 77,5           | 100 | 124,0-<br>134,0             |     |               |  |
|                            |                                    |                            | 1200       | 4,5-10,5                         |     |                             | 375 | 15,2-<br>21,2 |  |

Checking values in brackets

\* 1 mm less control rod travel than col 2

8.74

**BOSCH**

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B12

B.42

# Test Specifications Fuel Injection Pumps (1A) and Governors

40

VDT-WPP 001/4

6. Edition

En

PES 6 P 100 A 720 RS 1010 EP/RSV 400-1050 P2/370 D

supersedes 12.74 (4)  
company John Deere  
engine 6531 A

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,4 + 0,1 mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning (torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|---|
| 1050                             | 12,8                          | 14,8-15,0  | 0,3   |                               |  |   |
| 400                              | 6,7                           | 1,9- 2,5   | 0,3   |                               |  |   |

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

| ① Upper rated speed rev/min                      |                               |                                       | Intermediate rated speed |   |   | ④ Lower rated speed                      |              |                               | ③ Torque control |                                |
|--|-------------------------------|---------------------------------------|--------------------------|---|---|--|--------------|-------------------------------|------------------|--------------------------------|
| Degree of deflection of control lever<br>mm<br>1 | Control rod travel<br>mm<br>2 | Control rod travel<br>mm rev/min<br>3 | 4                        | 5 | 6 | Control lever deflection in degrees<br>7 | rev/min<br>8 | Control rod travel<br>mm<br>9 | rev/min<br>10    | Control rod travel<br>mm<br>11 |
| ca.43  | 1050                          | 15,6-16,4                             | without auxiliary spring |   |   | ca.19                                    | 400          | 7,2                           | 1050             | 0                              |
|  | 1100                          | 6,2- 9,6                              |                          |   |   |  | 200          | 19 - 21                       | 750              | 0,8-1,0                        |
|  | 1150                          | 3,8- 5,2                              |                          |   |   |  | 750          | 0 -1,5                        | 500              | 0,8-1,0                        |
|  | 1220                          | 0,3- 2,6                              |                          |   |   |  | 350          | 11,0-14,0                     |                  |                                |
|  | 1260                          | 0,3- 1,5                              |                          |   |   |  | 600          | 1,4- 4,2                      |                  |                                |

The numbers denote the sequence of the tests

## C. Settings for Fuel Injection Pump with Fitted Governor

| ②b Full-load stop          |                                    | ⑥ Rotational speed limit  |     | ③a Fuel delivery characteristics   |     | Starting fuel delivery |                                    | ④a Idle stop |                                |
|----------------------------|------------------------------------|---------------------------|-----|------------------------------------|-----|------------------------|------------------------------------|--------------|--------------------------------|
| Test oil temp 40°C (104°F) |                                    | Note changed to ) rev/min |     |                                    |     | Idle                   |                                    |              |                                |
| rev/min<br>1               | cm <sup>3</sup> /1000 strokes<br>2 | 3                         | 4   | cm <sup>3</sup> /1000 strokes<br>5 | 6   | rev/min<br>7           | cm <sup>3</sup> /1000 strokes<br>8 | rev/min<br>9 | Control rod travel<br>mm<br>10 |
| 0,8                        | bar                                | 1085-1095<br>(1080-1100)  | 750 | 0,8                                | 100 | 160,0-190,0            |                                    |              |                                |
| 1050                       | 148,0-150,0<br>(146,0-152,0)       |                           | XX  | 164,5-167,5<br>(163,0-169,0)       |     |                        |                                    |              |                                |
|                            |                                    |                           | 0   | bar                                | 400 | 19,0-25,0              |                                    |              |                                |
|                            |                                    |                           | 550 | 108,0-116,0                        |     |                        |                                    |              |                                |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

8.75

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# Test Specifications Fuel Injection Pumps 1A and Governors

40

VDT-WPP 001/4

7. Edition

En

PES 4 A 85 C 420 LS 2263 EP/RSV 375-1100 A 2 B 579 DR

supersedes 16.9.70, 17.2.71  
Case 29.4.71  
company 15.2.72  
engine 20.7.72  
A301 BD 24.11.72

Test with case overflow valve  
and regulator in accordance with special setting.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke

mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1000                             | 9                             | 4,15 - 4,55  | 0,4   |                               |  |  |
|                                  | 6                             | 1,15 - 1,95  |   |                               |  |  |
|                                  | 12                            | 7,25 - 8,05  |   |                               |  |  |
| 200                              | 6                             | 0,95 - 1,75  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

| 1 Upper rated speed rev/min                |                               |                                       | Intermediate rated speed |   |   | 4 Lower rated speed                      |              |                               | 3 Torque control |                                |
|--|-------------------------------|---------------------------------------|--------------------------|---|---|--|--------------|-------------------------------|------------------|--------------------------------|
| Degree of deflection of control lever<br>1 | Control rod travel<br>mm<br>2 | Control rod travel<br>mm rev/min<br>3 | 4                        | 5 | 6 | Control lever deflection in degrees<br>7 | rev/min<br>8 | Control rod travel<br>mm<br>9 | rev/min<br>10    | Control rod travel<br>mm<br>11 |
| ca. 43                                     | 1120                          | 11,4                                  | without auxiliary spring |   |   | ca. 22                                   | 375          | 7,2                           | 1100             | 0                              |
|  | 1160                          | 7,4                                   |                          |   |   |  | 150          | 19 - 21                       | 900              | 0,3-0,5                        |
|  | 1210                          | 2,2                                   |                          |   |   |  | 375          | 6,9-7,5                       |                  |                                |
| 2a   | 1140                          | 11,2-11,8                             | with auxiliary spring    |   |   |  | 450          | 3,6-5,2                       | 500              | 0,4-0,7                        |
|  | 1200                          | 4,5-5,8                               |                          |   |   |  | 600          | 0-1                           |                  |                                |
|  | 1300                          | 0,3-1                                 |                          |   |   |  |              |                               |                  |                                |

The numbers denote the sequence of the tests

## C. Settings for Fuel Injection Pump with Fitted Governor

| 2b Full-load stop          |                                    | 6 Rotational speed limit  |      | 3a Fuel delivery characteristics |     | Starting fuel delivery 5 |     | 4a Idle stop |                               |
|----------------------------|------------------------------------|---------------------------|------|----------------------------------|-----|--------------------------|-----|--------------|-------------------------------|
| Test oil temp 40°C (104°F) |                                    | Note changed to ) rev/min |      |                                  |     | Idle                     |     |              |                               |
| rev/min<br>1               | cm <sup>3</sup> /1000 strokes<br>2 | 3                         | 4    | 5                                | 6   | 7                        | 8   | 9            | Control rod travel<br>mm<br>9 |
| 1100                       | 73,5 - 75,5                        | 1140-1155*                | 750  | 76,5 - 79,5                      | 100 | 124,0 - 134,0            |     |              |                               |
|                            |                                    |                           | 650  | max. 78,0                        |     |                          |     |              |                               |
|                            |                                    |                           | 1200 | 6,5 - 14,5                       |     |                          | 375 | 15,5-19,5    |                               |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

8.74

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# Test Specifications Fuel Injection Pumps 1A and Governors

40

VDT-WPP 001/4 IHC 2,2q

En

|                          |                               |            |         |
|--------------------------|-------------------------------|------------|---------|
| PES 4 M 65 A 420 LS 35 X | EP/RSV 250-950 M1A 103D, 105D | supersedes | 13.4.62 |
| LS 35 W                  | -1000 M1A 103D, 105D          | company    | IHC     |
| LS 35 T                  |                               | engine     | DD 148  |
| LS 35 S                  |                               |            | DD 132  |

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 1,7 + 0,1 mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1000                             | 12                            | 3,2-3,7  | 0,3   |                               |  |  |
|                                  | 9                             | 1,5-2,3  |   |                               |  |  |
|                                  | 18                            | 6,7-7,5  |   |                               |  |  |
| 200                              | 9                             | 0,6-1,3  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in  

Testoil-ISO 4113

## B. Governor Settings

EP/RSV 250-950 M 1 A 105 D

| 1 Upper rated speed rev/min                |                               |                                       | Intermediate rated speed |   |   | 4 Lower rated speed                      |              |                               | 3 Torque control |                                |
|--|-------------------------------|---------------------------------------|--------------------------|---|---|--|--------------|-------------------------------|------------------|--------------------------------|
| Degree of deflection of control lever<br>1 | Control rod travel<br>mm<br>2 | Control rod travel<br>mm rev/min<br>3 | 4                        | 5 | 6 | Control lever deflection in degrees<br>7 | rev/min<br>8 | Control rod travel<br>mm<br>9 | rev/min<br>10    | Control rod travel<br>mm<br>11 |
| ca. 58                                     | 950                           | 16                                    | without auxiliary spring |   |   | ca. 31                                   | 250          | 9                             | 930              | 0                              |
|  | 1000                          | 12,4                                  |                          |   |   |  | 100          | 19-19,5                       | 700              | 0,3-0,5                        |
|  | 1050                          | 8,2                                   |                          |   |   |  | 250          | 8,7-9,3                       | 500              | 0,7-0,9                        |
| 2a   | 1020                          | 9,4-12                                | with auxiliary spring    |   |   |  | 400          | 5,5-7,4                       |                  |                                |
|  | 1100                          | 4,2-6,8                               |                          |   |   |  | 500          | 1,8-5,6                       |                  |                                |
|  | 1150                          | 1,4-4,8                               |                          |   |   |  | 750          | 0 - 1                         |                  |                                |
|  | 1250                          | 0 - 1                                 |                          |   |   |  |              |                               |                  |                                |

The numbers denote the sequence of the tests

## C. Settings for Fuel Injection Pump with Fitted Governor

| 2b Full-load stop          |                                    | 6 Rotational speed limit |              | 3a Fuel delivery characteristics   |              | Starting fuel delivery Idle        |              | 5 Idle stop                   |  |
|----------------------------|------------------------------------|--------------------------|--------------|------------------------------------|--------------|------------------------------------|--------------|-------------------------------|--|
| Test oil temp 40°C (104°F) |                                    | Note changed to )        |              |                                    |              |                                    |              |                               |  |
| rev/min<br>1               | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3             | rev/min<br>4 | cm <sup>3</sup> /1000 strokes<br>5 | rev/min<br>6 | cm <sup>3</sup> /1000 strokes<br>7 | rev/min<br>8 | Control rod travel<br>mm<br>9 |  |
| 930                        | 39,5-41,5                          | 960                      | 500<br>700   | 42,0-45,0<br>40,0-42,0             |              |                                    |              |                               |  |

Checking values in brackets

\* 1 mm less control rod travel than col 2

12.64

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B15

B15

## B. Governor Settings

EP/RSV 250-950 M 1 A 103 D

IHC 2,2 q

| Upper rated speed                     |                                  |                                  | Intermediate rated speed              |           |                       | Lower rated speed                     |         |                       | Torque-control travel |         |
|---------------------------------------|----------------------------------|----------------------------------|---------------------------------------|-----------|-----------------------|---------------------------------------|---------|-----------------------|-----------------------|---------|
| Degree of deflection of control lever | rev/min<br>Control rod travel mm | Control rod travel mm<br>rev/min | Degree of deflection of control lever | rev/min   | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | rev/min               | mm      |
| 1                                     | 2                                | 3                                | 4                                     | 5         | 6                     | 7                                     | 8       | 9                     | 10                    | 11      |
| ca. 58                                | 950                              | 16                               | without auxiliary spring              | auxiliary |                       | ca. 31                                | 250     | 9                     | 930                   | 0       |
|                                       | 1000                             | 12,4                             |                                       |           |                       |                                       | 100     | 19-19,5               | 700                   | 0,6-0,8 |
|                                       | 1050                             | 8                                |                                       |           |                       |                                       | 250     | 8,7-9,3               | 500                   | 1,0-1,2 |
|                                       | 1020                             | 9 - 11,6                         |                                       |           |                       |                                       | 400     | 5,5-7,3               |                       |         |
|                                       | 1100                             | 4 - 6,5                          | with auxiliary spring                 |           |                       |                                       | 500     | 1,8-5,6               |                       |         |
|                                       | 1150                             | 1 - 4,4                          |                                       |           |                       |                                       | 700     | 0 - 1                 |                       |         |
|                                       | 1250                             | 0 - 1                            |                                       |           |                       |                                       |         |                       |                       |         |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp 40°C (104°F) |                               | Rotational-speed limitation<br>intermediate speed | Fuel delivery characteristics<br>high idle speed |                               | Starting fuel delivery<br>idle switching point |                               | Torque-control travel |                       |
|--|-------------------------------|---|--|-------------------------------|--|-------------------------------|-----------------------|-----------------------|
| rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min               | Control rod travel mm |
| 1  | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                     | 9                     |
| X 930  | 32,0-34,0                     | 960   | 500  | 36,5-39,5                     |  |                               |                       |                       |
|  |                               |   | 700  | 34,5-36,5                     |  |                               |                       |                       |

Checking values in brackets

\* 1 mm less control rod travel than col 2

Testoil-ISO 4113

## B. Governor Settings

EP/RSV 250-1000 M 1 A 103 D

| Upper rated speed                     |                                  |                                  | Intermediate rated speed              |           |                       | Lower rated speed                     |         |                       | Torque-control travel |         |
|---------------------------------------|----------------------------------|----------------------------------|---------------------------------------|-----------|-----------------------|---------------------------------------|---------|-----------------------|-----------------------|---------|
| Degree of deflection of control lever | rev/min<br>Control rod travel mm | Control rod travel mm<br>rev/min | Degree of deflection of control lever | rev/min   | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | rev/min               | mm      |
| 1                                     | 2                                | 3                                | 4                                     | 5         | 6                     | 7                                     | 8       | 9                     | 10                    | 11      |
| ca. 62                                | 1000                             | 16                               | without auxiliary spring              | auxiliary |                       | ca. 32                                | 250     | 9                     | 980                   | 0       |
|                                       | 1050                             | 12,6                             |                                       |           |                       |                                       | 100     | 19-19,5               | 800                   | 0,3-0,5 |
|                                       | 1100                             | 8,4                              |                                       |           |                       |                                       | 250     | 8,7- 9,3              | 500                   | 1,0-1,2 |
|                                       | 1080                             | 8,5-11,2                         |                                       |           |                       |                                       | 400     | 5,6- 7,4              |                       |         |
|                                       | 1150                             | 4,2- 6,8                         | with auxiliary spring                 |           |                       |                                       | 500     | 1,8- 5,6              |                       |         |
|                                       | 1200                             | 1,2- 4,8                         |                                       |           |                       |                                       | 720     | 0 - 1                 |                       |         |
|                                       | 1300                             | 0 - 1                            |                                       |           |                       |                                       |         |                       |                       |         |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp 40°C (104°F) |                               | Rotational-speed limitation<br>intermediate speed | Fuel delivery characteristics<br>high idle speed |                               | Starting fuel delivery<br>idle switching point |                               | Torque-control travel |                       |
|--|-------------------------------|---|--|-------------------------------|--|-------------------------------|-----------------------|-----------------------|
| rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min               | Control rod travel mm |
| 1  | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                     | 9                     |
| S 980  | 32,0-34,0                     | 1010  | 500  | 36,5-39,5                     |  |                               |                       |                       |
|  |                               |   | 800  | 34,5-36,5                     |  |                               |                       |                       |

Checking values in brackets

\* 1 mm less control rod travel than col 2

En

**B. Governor Settings**

| Upper rated speed                     |                                  |                                  | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Torque-control travel |         |
|---------------------------------------|----------------------------------|----------------------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-----------------------|---------|
| Degree of deflection of control lever | rev/min<br>Control rod travel mm | Control rod travel mm<br>rev/min | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | rev/min               | mm      |
| 1                                     | 2                                | 3                                | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                    | 11      |
| ca. 62                                | 1000                             | 16                               |                                       |         |                       | ca. 32                                | 250     | 9                     | 980                   | 0       |
|                                       | 1050                             | 12,6                             | without auxiliary spring              |         |                       |                                       | 100     | 19- 19,5              | 700                   | 0,3-0,5 |
|                                       | 1100                             | 8,4                              |                                       |         |                       |                                       | 250     | 8,7- 9,3              | 500                   | 0,7-0,9 |
|                                       | 1080                             | 8,5-11                           |                                       |         |                       |                                       | 400     | 5,6-7,4               |                       |         |
|                                       | 1150                             | 4,2-6,8                          | with auxiliary spring                 |         |                       |                                       | 500     | 2 -5,6                |                       |         |
|                                       | 1200                             | 1,2-4,8                          |                                       |         |                       |                                       | 700     | 0 - 1                 |                       |         |
|                                       | 1300                             | 0 - 1                            |                                       |         |                       | (3a)                                  |         |                       |                       |         |

Torque control travel a = mm

**C. Settings for Fuel Injection Pump with Fitted Governor**

| Full-load delivery<br>Control-rod stop<br>Test oil temp 40°C (104°F) |                               | Rotational-speed limitation<br>intermediate speed | Fuel delivery characteristics<br>high idle speed |                               | Starting fuel delivery<br>idle switching point | Torque-control travel |                       |
|--|-------------------------------|---|--|-------------------------------|--|-----------------------|-----------------------|
| rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | rev/min               | Control rod travel mm |
| 1  | 2                             | 3   | 4  | 5                             | 6  | 7                     | 8                     |
| T 980  | 39,5-41,5                     | 1010  | 500  | 42,0-45,0                     |  |                       |                       |
|  |                               |   | 800  | 40,0-42,0                     |  |                       |                       |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

Testoil-ISO 4113

**D. Adjustment Test for Manifold Pressure Compensator**Test at n = rev/min decreasing pressure - in bar gauge pressure  
increasing

| Pump/governor | Setting              | Measurement          | Control rod travel-<br>diminution difference |
|---------------|----------------------|----------------------|--|
|               | Gauge pressure = bar | Gauge pressure = bar | mm   |
|               |                      |                      |  |

En

# Test Specifications Fuel Injection Pumps (1A) and Governors

40

WPP 001/4

1. Edition

En

PES 6 A 100 D 410 RS3025Z EP/RSV 400-1100 A2B765DL  
RS 3025 EP/RSV 400-1100 A2B766DL  
RS 3025 EP/RSV 400-1100 A7B767 L

supersedes -  
company John Deere  
engine 6404 A

Test-pressure line 6 x 2 x 600 Inlet pressure 1.5 bar

Manifold-pressure compensator (LDA) adjustment page 3!

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke  $2,0+0,1(+0,15)$   
 $-0,05)$  mm (from BDC)

Port closing mark 14 °  
after port closing.

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1000                             | 9                             | 7,6 - 8,3  | 0,5   |                               |  |  |
|                                  | 6                             | 3,2 - 4,2  |   |                               |  |  |
|                                  | 12                            | 12,2 - 13,5  |   |                               |  |  |
| 200                              | 9                             | 4,0 - 5,2  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in

400-1100 A2B765DL mit 3025Z

## B. Governor Settings

| 1 Upper rated speed rev/min<br>Degree of deflection of control lever<br>1 |   |  | Intermediate rated speed |   |   | 4 Lower rated speed<br>Control lever deflection in degrees<br>7 |   |  | 3 Torque control<br>Control rod travel<br>mm<br>11 |          |
|---|---|--|--------------------------|---|---|---|---|--|--|----------|
| Control rod travel<br>mm<br>2   | Control rod travel<br>mm rev/min<br>3         |  | 4                        | 5 | 6 | rev/min<br>8  | Control rod travel<br>mm<br>9                                     |  | rev/min<br>10                                      | mm<br>11 |
| ca. 43  | 1060 16,0<br>1145 9,5<br>1200 4,5             |  | without auxiliary spring |   |   | ca. 21  | 400 6,3<br>200 19 - 21<br>400 6,0-6,6<br>450 3,7-4,8<br>560 0 - 1 |  | 1100 0<br>500 0,4-0,7                              |          |
| 2a  | 1100 ca. 10,5<br>1200 ca. 4,5<br>1250 0,3-1,0 |  |                          |   |   |   |   |  |  |          |

The numbers denote the sequence of the tests

## C. Settings for Fuel Injection Pump with Fitted Governor

| 2b Full-load stop<br>Test oil temp 40°C (104°F)<br>rev/min<br>1 |  | 6 Rotational speed limit<br>Note changed to 1<br>rev/min<br>3 |  | 3a Fuel delivery characteristics<br>rev/min<br>4             |  | Starting fuel delivery<br>Idle<br>rev/min<br>6     |  | 5 4a Idle stop<br>Control rod travel<br>mm<br>9 |  |
|---|--|---|--|--|--|--|--|---|--|
| cm <sup>3</sup> /1000 strokes<br>2                              |  |   |  | cm <sup>3</sup> /1000 strokes<br>5                           |  | cm <sup>3</sup> /1000 strokes<br>7                 |  | rev/min<br>8                                    |  |
| LDA 0,8 bar<br>1100 107,5-109,5                                 |  | 1140-1150*<br>(1135-1155)                                     |  | LDA 0,8 bar<br>750 118,5-121,5<br>LDA 0 bar<br>550 53,0-59,0 |  | 100 156,0-176,0<br>400 11,5-15,5<br>1200 20,5-26,5 |  | 400 6,3   |  |

(increase by 2,0 cm<sup>3</sup>!)

Checking values in brackets

\* 1 mm less control rod travel than col 2

9.76

Testoil-ISO 4113

B18

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B18



The numbers denote the sequence of the tests

400-1100 A2B766DL

**B. Governor Settings**

| 1 Upper rated speed rev/min           |                       |                                | Intermediate rated speed |   |   | 4 Lower rated speed                 |                          |  | 3 Torque control |                       |
|---------------------------------------|-----------------------|--------------------------------|--------------------------|---|---|-------------------------------------|--------------------------|--|------------------|-----------------------|
| Degree of deflection of control lever | Control rod travel mm | Control rod travel mm rev/min  |                          |   |   | Control-lever deflection in degrees | rev/min                  | Control rod travel mm                  | rev/min          | Control rod travel mm |
| 1                                     | 2                     | 3                              | 4                        | 5 | 6 | 7                                   | 8                        | 9                                      | 10               | 11                    |
| ca. 43                                | 1060<br>1145<br>1200  | 16,0<br>9,3<br>4,3             | without auxiliary spring |   |   | ca. 21                              | 400                      |  | 1100             | 0                     |
| 2a                                    | 1100<br>1200<br>1270  | ca. 10,4<br>ca. 4,3<br>0,3-1,0 |                          |   |   |                                     | 200<br>400<br>500<br>580 | 19 - 21<br>6,0-6,6<br>0,4-3,2<br>0 - 1 | 500              | 1,7-1,9               |
|                                       |                       |                                | with auxiliary spring    |   |   |                                     |                          |  |                  |                       |
|                                       |                       |                                |                          |   |   |                                     |                          |  |                  |                       |

Testoil-ISO 4113

**C. Settings for Fuel Injection Pump with Fitted Governor**

| 2b Full-load stop           |                        | 6 Rotational-speed limitat   |  | 3a Fuel delivery characteristics |                        | Starting fuel delivery Idle |                                       | 5 4a Idle stop |                       |
|-----------------------------|------------------------|------------------------------|--|----------------------------------|------------------------|-----------------------------|---------------------------------------|----------------|-----------------------|
| Test oil temp. 40°C (104°F) |                        | Note: changed to ... rev/min |  |                                  |                        |                             |                                       |                |                       |
| rev/min                     | cm³/1000 strokes       | rev/min                      |  | rev/min                          | cm³/1000 strokes       | rev/min                     | cm³/1000 strokes                      | rev/min        | Control rod travel mm |
| 1                           | 2                      | 3                            |  | 4                                | 5                      | 6                           | 7                                     | 8              | 9                     |
| LDA<br>1100                 | 0,8 bar<br>107,0-109,0 | 1140-1150*<br>(1135-1155)    |  | LDA<br>500                       | 0,8 bar<br>122,5-125,5 | 100<br>400<br>1200          | 156,0-176,0<br>11,5-15,5<br>18,5-28,5 | 400            | 6,3                   |
| (increase by 2,0 cm³!)      |                        |                              |  |                                  |                        |                             |                                       |                |                       |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

**B. Governor Settings**

| 1 Upper rated speed rev/min           |                       |                                  | Intermediate rated speed |   |   | 4 Lower rated speed                 |                          |  | 3 Torque control |                       |
|---------------------------------------|-----------------------|----------------------------------|--------------------------|---|---|-------------------------------------|--------------------------|--|------------------|-----------------------|
| Degree of deflection of control lever | Control rod travel mm | Control rod travel mm rev/min    |                          |   |   | Control-lever deflection in degrees | rev/min                  | Control rod travel mm                  | rev/min          | Control rod travel mm |
| 1                                     | 2                     | 3                                | 4                        | 5 | 6 | 7                                   | 8                        | 9                                      | 10               | 11                    |
| ca. 72                                | 1070<br>1100<br>1150  | 16,0<br>11,6<br>4,2              | without auxiliary spring |   |   | ca. 30                              | 400                      | 6,3                                    |                  |                       |
| 2a                                    | 1080<br>1120<br>1180  | ca. 10,6<br>7,0- 9,6<br>0,3- 1,0 |                          |   |   |                                     | 150<br>400<br>450<br>500 | 19 - 21<br>6,0-6,6<br>1,7-3,7<br>0 - 1 |                  |                       |
|                                       |                       |                                  | with auxiliary spring    |   |   |                                     |                          |  |                  |                       |
|                                       |                       |                                  |                          |   |   |                                     |                          |  |                  |                       |

**C. Settings for Fuel Injection Pump with Fitted Governor**

| 2b Full-load stop           |                  | 6 Rotational-speed limitat   |  | 3a Fuel delivery characteristics |                  | Starting fuel delivery Idle |                                       | 5 4a Idle stop |                       |
|-----------------------------|------------------|------------------------------|--|----------------------------------|------------------|-----------------------------|---------------------------------------|----------------|-----------------------|
| Test oil temp. 40°C (104°F) |                  | Note: changed to ... rev/min |  |                                  |                  |                             |                                       |                |                       |
| rev/min                     | cm³/1000 strokes | rev/min                      |  | rev/min                          | cm³/1000 strokes | rev/min                     | cm³/1000 strokes                      | rev/min        | Control rod travel mm |
| 1                           | 2                | 3                            |  | 4                                | 5                | 6                           | 7                                     | 8              | 9                     |
| 1080                        | 112,0-114,0      | 1110-1120*<br>(1105-1125)    |  |                                  |                  | 100<br>400<br>1150          | 156,0-176,0<br>11,5-15,5<br>11,5-21,5 | 400            | 6,3                   |
| (increase by 2,0 cm³)       |                  |                              |  |                                  |                  |                             |                                       |                |                       |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

# D. Adjustment Test for Manifold Pressure Compensator

Test at n =                      rev/min    decreasing pressure - in bar gauge pressure  
 XXXXXXXX

| Pump/governor                          | Setting<br>Gauge pressure =                      bar | Measurement<br>Gauge pressure =                      bar | Control rod travel-<br>diminution difference<br>mm                      (1) |
|--|--|--|---|
| 3025Z with 765DL                       | 0,62   | 0,11   | -0,1-0,2<br>-3,0-3,3  |
| 3025 with 766DL                        | 0,55   | 0,11   | -0,1-0,2<br>-2,6-2,8  |
| 3025 with 767 L                        | without  | L D A  | - - - -   |
| Switching point<br>(hydr. measurement) | max. 0,76  | mind. 0,48   | 10 - 11 mm RW<br>19 - 21 mm RW  |

## Notes

(1) when n =                      rev/min and                      bar ( = maximum full-load control rod travel)  
 gauge pressure =

Preliminary adjustment, dimension H = 21,8 mm

Testoil-ISO 4113

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 VOL 10,0 f

4. Edition

En

PE 6 P 110 A 320 RS 273, Z RQV 250-1200 PA 238/2R

Port-closing test with/without ROBO diaphragm

supersedes 8.77  
company: VOLVO  
engine: TD 100 B

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke  $2,60-2,70$  mm (from BDC)  
( $2,55-2,75$ )

| Port closing at prestroke  |                    | (2,55-2,75)                  |                              | mm (from BUC)      |                              |  |
|--|--------------------|------------------------------|------------------------------|--------------------|------------------------------|--|
| Rotational speed   | Control rod travel | Fuel delivery                | Difference                   | Control rod travel | Fuel delivery                | Spring pre-tensioning (torque-control valve) |
| rev/min  | mm                 | cm <sup>3</sup> /100 strokes | cm <sup>3</sup> /100 strokes | mm                 | cm <sup>3</sup> /100 strokes | mm   |
| 1  | 2                  | 3                            | 4                            | 2                  | 3                            | 6  |
| 1000   | 12                 | 18,2 - 18,9                  | 0,6                          |                    |                              | 2,5 <sup>±</sup> 0,1**<br>(max. 2,2-2,9)     |
| 600  | 15                 | 27,5 - 29,4                  |                              |                    |                              |  |
| 200  | 9                  | 7,9 - 9,1                    |                              |                    |                              |  |
| ** In the case of greater dispersion alter the delivery-valve spring pre-tension accordingly |                    |                              |                              |                    |                              |  |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

273 with 1200

| Upper rated speed                     |         |                       | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Sliding sleeve travel |         |
|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-----------------------|---------|
| Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | rev/min               | mm      |
| 1                                     | 2       | 3                     | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                    | 11      |
| ca. 50                                | 1290    | 15,0-18,4             |                                       |         |                       | ca. 13                                | 100     | 8,8-11,0              | 350                   | 1,4-2,0 |
|                                       | 1560    | 0                     |                                       |         |                       |                                       | 200     | 7,1- 9,9              | 600                   | 4,4-4,8 |
| ca. 45                                | 1200    | 15,0-18,2             |                                       |         |                       |                                       | 300     | 3,8- 6,8              | 1290                  | 8,2     |
|                                       | 1300    | 8,2-13,3              |                                       |         |                       |                                       | 400     | 0 - 3,6               |                       |         |
|                                       | 1400    | 0 - 7,4               |                                       |         |                       |                                       | 510     | 0                     | -                     | -       |
|                                       | 1510    | 0                     |                                       |         |                       | ③a                                    |         |                       |                       |         |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Rotational speed<br>limitation<br>intermediate speed | Fuel delivery characteristics<br>high idle speed | Starting fuel delivery<br>idle<br>switching point | Torque-control |
|---|-------------------------------|--|--|---|----------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | rev/min  | rev/min   | rev/min        |
| 1   | 2                             | 3  | 4  | 6   | 8              |
| LDA   | 0,85 bar                      |  | LDA  | 100   |                |
| 700   | 158,5-161,5<br>(156,5-163,5)  | 1230-1240*   | 700  | 20,5-21,0<br>mm RW                                |                |
|   |                               |  |  | 250   |                |
|   |                               |  |  | 11-15<br>dispersion max.2,5                       |                |
|   |                               |  |  |   | ./.            |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

## B. Governor Settings

273 Z with 1200

VOL 10,0 f -2-

| Upper rated speed                     |                                  |                                  | Intermediate rated speed              |               |                       | Lower rated speed                     |               |                       | Sliding sleeve travel |         |
|---------------------------------------|----------------------------------|----------------------------------|---------------------------------------|---------------|-----------------------|---------------------------------------|---------------|-----------------------|-----------------------|---------|
| Degree of deflection of control lever | rev/min<br>Control rod travel mm | Control rod travel mm<br>rev/min | Degree of deflection of control lever | rev/min<br>mm | Control rod travel mm | Degree of deflection of control lever | rev/min<br>mm | Control rod travel mm | rev/min               | mm      |
| 1                                     | 2                                | 3                                | 4                                     | 5             | 6                     | 7                                     | 8             | 9                     | 10                    | 11      |
| ca. 50                                | 1290                             | 15,0-18,4                        |                                       |               |                       | ca. 13                                | 100           | 8,8-11,0              | 350                   | 1,4-2,0 |
|                                       | 1560                             | 0                                |                                       |               |                       |                                       | 200           | 7,1- 9,9              | 600                   | 4,4-4,8 |
| ca. 45                                | 1200                             | 15,0-18,2                        |                                       |               |                       |                                       | 300           | 3,8-6,8               | 1290                  | 8,2     |
|                                       | 1300                             | 8,2-13,3                         |                                       |               |                       |                                       | 400           | 0 - 3,6               |                       |         |
|                                       | 1400                             | 0 - 7,4                          |                                       |               |                       |                                       | 510           | 0                     |                       |         |
|                                       | 1510                             | 0                                |                                       |               |                       | 3a                                    |               |                       |                       |         |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |  | Rotational speed limitation<br>intermediate speed | Fuel delivery characteristics<br>high idle speed | Starting fuel delivery<br>idle switching point              | Torque-control travel |
|---|--|---|--|---|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes            | rev/min   | rev/min cm <sup>3</sup> /1000 strokes            | rev/min cm <sup>3</sup> /1000 strokes                       | rev/min mm            |
| 1   | 2  | 3   | 4  | 5   | 6                     |
| LDA 700   | 0,85 bar<br>135,5-138,5<br>(133,5-140,5) | 1230-1240*  | LDA 700<br>0 bar<br>113,5-116,5<br>(111,5-118,5) | 100<br>20,5-21,0 mm RW<br>250<br>11-15 dispersion max.2,5** |                       |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

## D. Adjustment Test for Manifold Pressure Compensator

Test at n = rev/min decreasing pressure - in bar gauge pressure  
increasing

| Pump/governor   | Setting<br>Gauge pressure = bar | Measurement<br>Gauge pressure = bar | Control rod travel<br>diminution difference<br>mm |
|-----------------|---------------------------------|-------------------------------------|---|
| 273 with 1200   | 0,52 - 0,54                     | 0,11 - 0,19                         | ---   |
| 273 Z with 1200 | 0,40 - 0,42                     | 0,11 - 0,19                         | ---   |

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Testoil-ISO 4113

①

# Test Specifications Fuel Injection Pumps ① and Governors

40

WPP 001/4 ALO 11,0 a

1. Edition

En

PES 6 P 110 A 320 RS 211 RQV 300 1000 PA 217 KR

0 402 046 083

1 - 5 - 3 - 6 - 2 - 4

Calibrating nozzle-and-holder assembly 0 681 343 009

Test-pressure line

9 681 230 704

supersedes

company Allis-Chalmers

11000

engine

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8+0,1 mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning (torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|---|
| 1000                             | 12                            | 160-168  |   |                               |  |   |
| 600                              | 9                             | 85- 91   |   |                               |  |   |
|                                  | 12                            | 152-161  |   |                               |  |   |
|                                  | 15                            | 215-233  |   |                               |  |   |
| 200                              | 9                             | 68- 81   |   |                               |  |   |

Adjust the fuel delivery from each outlet according to the values in 

## B. Governor Settings

Testoil-ISO 4113

| Upper rated speed                     |         |                       | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Sliding sleeve travel |    |
|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-----------------------|----|
| Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | rev/min               | mm |
| 1                                     | 2       | 3                     | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                    | 11 |
| 66°                                   | 1050    | 15,0-18,0             |                                       |         |                       | 10°                                   | 250     | 6,4-8,0               |                       |    |
|                                       | 1100    | 10,8-15,0             |                                       |         |                       |                                       | 300     | 4,8-7,0               |                       |    |
|                                       | 1150    | 5,8-11,6              |                                       |         |                       |                                       | 350     | 3,0-5,2               |                       |    |
|                                       | 1200    | 0,7- 7,8              |                                       |         |                       |                                       | 400     | 2,2-3,8               |                       |    |
|                                       | 1300    | 0                     |                                       |         |                       |                                       | 550     | 0                     |                       |    |
|                                       |         |                       |                                       |         |                       | 3a                                    |         |                       |                       |    |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Rotational-speed limitation<br>intermediate speed | Fuel delivery characteristics<br>high idle speed |                               | Starting fuel delivery<br>idle switching point |                               | Torque-control travel |                       |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|-----------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min               | Control rod travel mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                     | 9                     |
|   |                               |   |  |                               |  |                               |                       |                       |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

B23

923

**BOSCH**

Geschäftsbereich KH, Kundendienst, Kfz-Ausrüstung  
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# C. Settings for Fuel Injection Pump with Fitted Governor

AL0 11,0 a

-2-

|   |                  |                                       |  |                  |  |                  |                  |                       |
|---|------------------|---------------------------------------|--|------------------|--|------------------|------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤ |                       |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3                                     | 4  | 5                | 6  | 7                | 8                | 9                     |

AC-Nr. 4 392 715

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 392 717

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 719

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 392 721

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

AC-Nr. 4 392 723

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 725

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0.

AC-Nr. 4 392 727

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 729

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 731

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 392 735

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 392 737

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 392 739

1050 207,0-213,0 1070 900 195,0-201,0 100 130,0-170,0 300 19,0-25,0  
700 225,0-231,0

AC-Nr. 4 392 741

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0  
700 230,0-236,0

AC-Nr. 4 392 743

Checking values in brackets  
En 1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

\* 1 mm less control rod travel than col. 2

**Testoil-ISO 4113**

**C. Settings for Fuel Injection Pump with Fitted Governor**

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a) |                               | Starting fuel delivery<br>Idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|----------------|------------------------------------|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min                            | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4                                  | 5                             | 6  | 7                             | 8                  | 9                     |
| AC-Nr. 4 392 747  |                               |                |                                    |                               |  |                               |                    |                       |
| 1050  | 227,0-233,0                   | 1070           | 900                                | 208,0-214,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
|   |                               |                | 700                                | 247,0-253,0                   |  |                               |                    |                       |
| AC-Nr. 4 392 749  |                               |                |                                    |                               |  |                               |                    |                       |
| 1050  | 230,0-234,0                   | 1070           |                                    |                               | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 392 750  |                               |                |                                    |                               |  |                               |                    |                       |
| 1050  | 230,0-234,0                   | 1070           |                                    |                               | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 392 768  |                               |                |                                    |                               |  |                               |                    |                       |
| 800   | 123,0-133,0                   | 820            | 600                                | 132,0-142,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 392 775/776  |                               |                |                                    |                               |  |                               |                    |                       |
| 875   | 162,0-164,0                   | 890            | 600                                | 140,0-144,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 392 777  |                               |                |                                    |                               |  |                               |                    |                       |
| 950   | 205,0-207,0                   | 970            | 700                                | 195,0-199,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 392 778  |                               |                |                                    |                               |  |                               |                    |                       |
| 950   | 208,0-214,0                   | 990            | 750                                | 196,0-202,0                   | 100  | 130,0-170,0                   | 300                | 21,0-27,0             |
| AC-Nr. 4 392 779  |                               |                |                                    |                               |  |                               |                    |                       |
| 1025  | 190,0-200,0                   | 1030-40        | 1000                               | 191,0-201,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
|   |                               |                | 900                                | 178,0-188,0                   |  |                               |                    |                       |
| AC-Nr. 4 392 781  |                               |                |                                    |                               |  |                               |                    |                       |
| 1025  | 228,0-238,0                   | 1050-60        | 900                                | 205,0-215,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
|   |                               |                | 700                                | 207,0-217,0                   |  |                               |                    |                       |
| AC-Nr. 4 392 953  |                               |                |                                    |                               |  |                               |                    |                       |
| 940   | 185,0-195,0                   | 955-65         |                                    |                               | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 393 095  |                               |                |                                    |                               |  |                               |                    |                       |
| 1050  | 211,0-221,0                   | 1060-80        | 900                                | 210,0-220,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
|   |                               |                | 700                                | 238,0-248,0                   |  |                               |                    |                       |
| AC-Nr. 4 393 307  |                               |                |                                    |                               |  |                               |                    |                       |
| 900   | 210,0-216,0                   | 920            | 700                                | 212,0-128,0                   | 100  | 130,0-170,0                   | 300                | 27,0-33,0             |
| AC-Nr. 4 393 431  |                               |                |                                    |                               |  |                               |                    |                       |
| 1050  | 208,0-214,0                   | 1070           | 900                                | 230,0-235,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
|   |                               |                | 700                                | 260,0-266,0                   |  |                               |                    |                       |
| AC-Nr. 4 393 821  |                               |                |                                    |                               |  |                               |                    |                       |
| 1050  | 242,0-248,0                   | 1070           | 900                                | 220,0-226,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
|   |                               |                | 700                                | 230,0-236,0                   |  |                               |                    |                       |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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**Testoil-ISO 4113**

# C. Settings for Fuel Injection Pump with Fitted Governor

ALO 11,0 a

-4-

|   |                               |                |  |                               |   |                               |                    |                             |
|---|-------------------------------|----------------|--|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min (4a)   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3              | 4  | 5                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 393 823

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 187,0-193,0 | 1070 | 900 | 174,0-180,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 175,0-181,0 |     |             |     |           |

AC-Nr. 4 393 825

|      |             |      |     |           |     |             |     |           |
|------|-------------|------|-----|-----------|-----|-------------|-----|-----------|
| 1050 | 224,0-230,0 | 1070 | 800 | 185,0-191 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 393 827

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 200,0-206,0 | 1070 | 900 | 190,0-196,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 214,0-220,0 |     |             |     |           |

AC-Nr. 4 393 829

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 393 831

|      |             |      |     |             |     |             |  |  |
|------|-------------|------|-----|-------------|-----|-------------|--|--|
| 1050 | 213,0-219,0 | 1070 | 900 | 202,0-208,0 | 100 | 130,0-170,0 |  |  |
|      |             |      | 700 | 230,0-236,0 |     |             |  |  |

AC-Nr. 4 393 833

|      |       |           |     |       |     |             |     |           |
|------|-------|-----------|-----|-------|-----|-------------|-----|-----------|
| 1050 | 264,0 | 1060-1080 | 900 | 280,5 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------|-----------|-----|-------|-----|-------------|-----|-----------|

AC-Nr. 4 393 835

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-226,0 | 1070 | 900 | 210,0-216,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 243,0-249,0 |     |             |     |           |

AC-Nr. 4 393 837

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 227,0-233,0 | 1070 | 900 | 208,0-214,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 247,0-253,0 |     |             |     |           |

AC-Nr. 4 393 890

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 393 891

|     |       |         |     |       |  |  |  |  |
|-----|-------|---------|-----|-------|--|--|--|--|
| 955 | 208,0 | 965-975 | 895 | 203,0 |  |  |  |  |
|-----|-------|---------|-----|-------|--|--|--|--|

AC-Nr. 4 393 961

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 001

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 017

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 020

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 249,0-257,0 | 725 | 600 | 258,0-264,0 | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En AC-Nr. 4 394 062

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 113,0-119,0 | 820 | 600 | 102,0-108,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

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# C. Settings for Fuel Injection Pump with Fitted Governor

ALO 11,0 a -5-

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                                    | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                                    | Starting fuel delivery<br>Idle switching point (6) |                                    | Low idle speed (5) |                               |
|---|------------------------------------|----------------|--|------------------------------------|--|------------------------------------|--------------------|-------------------------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3   | rev/min<br>4   | cm <sup>3</sup> /1000 strokes<br>5 | rev/min<br>6                                       | cm <sup>3</sup> /1000 strokes<br>7 | rev/min<br>8       | Control rod travel<br>mm<br>9 |
| AC-Nr. 4 394 064  |                                    |                |  |                                    |  |                                    |                    |                               |
| 875   | 161,0-165,0                        | 890            | 600  | 140,0-144,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
| AC-Nr. 4 394 066  |                                    |                |  |                                    |  |                                    |                    |                               |
| 800   | 125,0-131,0                        | 820            | 600  | 134,0-140,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
| AC-Nr. 4 394 068  |                                    |                |  |                                    |  |                                    |                    |                               |
| 1025  | 192,0-198,0                        | 1045           | 900  | 180,0-186,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
| AC-Nr. 4 394 070  |                                    |                |  |                                    |  |                                    |                    |                               |
| 1000  | 200,0-206,0                        | 1020           | 800  | 180,0-186,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
|   |                                    |                | 600  | 189,0-195,0                        |  |                                    |                    |                               |
| AC-Nr. 4 394 072  |                                    |                |  |                                    |  |                                    |                    |                               |
| 940   | 185,0-195,0                        | 955-65         |  |                                    | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
| AC-Nr. 4 394 074  |                                    |                |  |                                    |  |                                    |                    |                               |
| 1025  | 230,0-236,0                        | 1040           | 900  | 207,0-213,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
|   |                                    |                | 700  | 209,0-215,0                        |  |                                    |                    |                               |
| AC-Nr. 4 394 076  |                                    |                |  |                                    |  |                                    |                    |                               |
| 1000  | 227,0-233,0                        | 1020           | 800  | 197,0-203,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
| AC-Nr. 4 394 078  |                                    |                |  |                                    |  |                                    |                    |                               |
| 1000  | 235,0-241,0                        | 1020           | 700  | 263,0-269,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
| AC-Nr. 4 394 080  |                                    |                |  |                                    |  |                                    |                    |                               |
| 1000  | 220,0-226,0                        | 1020           | 800  | 209,0-215,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
|   |                                    |                | 600  | 227,0-233,0                        |  |                                    |                    |                               |
| AC-Nr. 4 394 082  |                                    |                |  |                                    |  |                                    |                    |                               |
| 910   | 190,0                              | 930,0          |  |                                    | 100  | 130,0-170,0                        | 300                | 25,0                          |
| AC-Nr. 4 394 084  |                                    |                |  |                                    |  |                                    |                    |                               |
| 900   | 160,0-166,0                        | 920            | 700  | 139,0-145,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
| AC-Nr. 4 394 086  |                                    |                |  |                                    |  |                                    |                    |                               |
| 600   | 124,0-130,0                        | 620            |  |                                    | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
| AC-Nr. 4 394 088  |                                    |                |  |                                    |  |                                    |                    |                               |
| 700   | 127,0-133                          | 720            | 600  | 124,0-130,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
| AC-Nr. 4 394 090  |                                    |                |  |                                    |  |                                    |                    |                               |
| 800   | 139,0-145,0                        | 820            | 600  | 124,0-130,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
| AC-Nr. 4 394 092  |                                    |                |  |                                    |  |                                    |                    |                               |
| 925   | 157,0-163,0                        | 945            | 800  | 145,0-151,0                        | 100  | 130,0-170,0                        | 300                | 19,0-25,0                     |
|   |                                    |                | 600  | 134,0-140,0                        |  |                                    |                    |                               |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

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**C. Settings for Fuel Injection Pump with Fitted Governor**

|   |                               |                |  |                               |   |                               |                    |                             |
|---|-------------------------------|----------------|--|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics<br>high idle speed (5b) (5a) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min (4a)   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3              | 4  | 5                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 394 094

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 | 800 | 154,0-160,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 142,0-148,0 |     |             |     |           |

AC-Nr. 4 394 096

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 | 900 | 161,0-175,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 800 | 147,0-153,0 |     |             |     |           |

AC-Nr. 4 394 098

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 | 700 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 100

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 | 700 | 184,0-190,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 102

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 104

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 106

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 108

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 222,0-228,0 | 1075 | 900 | 202,0-208,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 207,0-213,0 |     |             |     |           |

AC-Nr. 4 394 110

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 240,0-246,0 | 1020 | 800 | 224,0-230,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 237,0-243,0 |     |             |     |           |

AC-Nr. 4 394 112

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 245,0-251,0 | 1070 | 900 | 224,0-230,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 237,0-243,0 |     |             |     |           |

AC-Nr. 4 394 114

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 394 116

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 210,0-216,0 | 920 | 700 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 118

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 | 900 | 281,0-287,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

Checking values in brackets

En

\* 1 mm less control rod travel than col. 2

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |                |  |                               |   |                               |                    |                             |
|---|-------------------------------|----------------|--|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min (4a)   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3              | 4  | 5                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 394 120

1050 234,0-240,0

1070

900 246,0-252,0  
700 268,0-274,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 122

1050 262,0-268,0

1070

900 279,0-285,0  
700 289,0-295,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 124

1050 241,0-247,0

1070

900 265,0-271,0  
700 268,0-274,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 126

900 232,0-238,0

920

700 253,0-259,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 128

750 244,0-250,0

770

700 253,0-259,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 130

800 239,0-245,0

820

600 248,0-254,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 132

1000 212,0-218,0

1020

800 230,0-236,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 134

900 288,0-294,0

920

700 287,0-293,0

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 136

1000 255,0-261,0

1020

800 272,0-278,0  
600 270,0-276,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 138

1050 239,0-245,0

1070

900 233,0-239,0  
700 273,0-279,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 140

1000 215,0-221,0

1020

800 197,0-203,0  
600 220,0-226,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 142

900 222,0-228,0

920

700 254,0-260,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 144

1050 257,0-263,0

1070

750 272,0-278,0

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 148

1050 295,0-303,0

1075

900 309,0-315,0

100 130,0-170,0 300 25,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

AC-Nr. 4 394 150

1050 268,0-274,0

1070

900 274,0-280,0  
700 280,0-286,0

100 130,0-170,0 300 19,0-25,0

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**C. Settings for Fuel Injection Pump with Fitted Governor**

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |   | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|----------------|--|---|--|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min        | rev/min  | cm³/1000 strokes                          | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3              | 4  | 5   | 6  | 7                | 8                  | 9                     |
| AC-Nr. 4 394 152  |                  |                |  |   |  |                  |                    |                       |
| 1050  | 262,0-268,0      | 1070           | 900<br>700   | 267,0-273,0<br>267,0-273,0                | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| AC-Nr. 4 394 154  |                  |                |  |   |  |                  |                    |                       |
| 1050  | 279,0-285,0      | 1070           | 900<br>700   | 283,0-289,0<br>293,0-299,0                | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| AC-Nr. 4 394 156  |                  |                |  |   |  |                  |                    |                       |
| 1050  | 296,0-302,0      | 1070           | 900<br>700   | 301,0-307,0<br>309,0-315,0                | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| AC-Nr. 4 394 157/158  |                  |                |  |   |  |                  |                    |                       |
| 1050  | 253,0-256,0      | 1070           | 900<br>700   | 252,0-258,0<br>269,0-275,0                | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| AC-Nr. 4 394 160  |                  |                |  |   |  |                  |                    |                       |
| 1050  | 208,0-214,0      | 1070           | 900<br>700   | 230,0-235,0<br>260,0-266,0                | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| AC-Nr. 4 394 162  |                  |                |  |   |  |                  |                    |                       |
| 900   | 181,0-187,0      | 920            | 700  | 172,0-178,0                               | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| AC-Nr. 4 394 164  |                  |                |  |   |  |                  |                    |                       |
| 925   | 176,0-182,0      | 945            | 800<br>700   | 162,0-168,0<br>177,0-183,0                | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| AC-Nr. 4 394 166  |                  |                |  |   |  |                  |                    |                       |
| 900   | 173,0-179,0      | 920            | 800  | 160,0-166,0                               | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| AC-Nr. 4 394 168  |                  |                |  |   |  |                  |                    |                       |
| 925   | 237,0-243,0      | 945            | 800<br>700   | 251,0-257,0<br>269,0-275,0                | 100  | 130,0-170,0      | 300                | 27,0-33,0             |
| AC-Nr. 4 394 170  |                  |                |  |   |  |                  |                    |                       |
| 700   | 218,0-224,0      | 720            | 600  | 240,0-246,0                               | 100  | 130,0-170,0      | 300                | 27,0-33,0             |
| AC-Nr. 4 394 176  |                  |                |  |   |  |                  |                    |                       |
| 1050  | 213,0-219,0      | 1070           | 900<br>700   | 212,0-218,0<br>240,0-246,0                | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| AC-Nr. 4 394 246  |                  |                |  |   |  |                  |                    |                       |
| 1050  | 211,0-220,0      | 1055-1075      | 975<br>700<br>600  | 237,5-247,0<br>258,5-269,5<br>255,5-266,0 | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| AC-Nr. 4 394 248  |                  |                |  |   |  |                  |                    |                       |
| 700   | 246,0            | 720            | 600  | 263,0                                     | 100  | 130,0-170,0      | 300                | 19,0-25,0             |
| Checking values in brackets   |                  |                |  |   |  |                  |                    |                       |
| AC-Nr. 4 394 250  |                  |                |  |   |  |                  |                    |                       |
| 1050  | 244,5-254,5      | 1060-1080      |  |   | 100  | 130,0-170,0      | 300                | 19,0-25,0             |

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\* 1 mm less control rod travel than col. 2

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Checking values in brackets

\* 1 mm less control rod travel than col. 2

**C. Settings for Fuel Injection Pump with Fitted Governor**

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 257

600 258,0

100 130,0-170,0 300 27,0

AC-Nr. 4 394 314

1050 246,0

1070

900 240,0  
700 267,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 331

1050 241,0-247,0

1070

900 265,0-271,0  
700 268,0-274,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 332

1050 268,0-274,0

1070

900 274,0-280,0  
700 280,0-286,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 347

1050 269,0-275,0

1070

900 281,0-287,0  
700 293,0-299,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 348

1050 234,0-240,0

1070

900 246,0-252,0  
700 268,0-274,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 349

1050 208,0-214,0

1070

900 230,0-236,0  
700 260,0-266,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 350

1050 262,0-268,0

1070

900 279,0-285,0  
700 289,0-295,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 351

1050 253,0-256,0

1070

900 252,0-258,0  
700 269,0-275,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 352

1050 262,0-268,0

1070

900 267,0-273,0  
700 267,0-273,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 353

1050 279,0-285,0

1070

900 283,0-289,0  
700 293,0-299,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 354

1050 296,0-302,0

1070

900 301,0-307,0  
700 309,0-315,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 356

Checking values in brackets

En 1050 246,0

900  
700240,0  
267,0

100

130,0-170,0 300 19,0-25,0

\* 1 mm less control rod travel than col. 2

**Testoil-ISO 4113**

①

C7

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 386

600 167,0-175,0

620

100 130,0-170,0 300 25,0

AC-Nr. 394 390

900 259,0-267,0

925

700 238,0-246,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 428

1000 188,0-196,0

1025

800 180,0-187,0

100 130,0-170,0 300 25,0

AC-Nr. 4 394 473

850 189,0-197,0

875

750 185,0-193,0

100 130,0-170,0 325 30,0

AC-Nr. 4 394 501

900 175,0

925

700 158,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 521

1000 239,0-247,0

1025

700 229,0-235,0

100 130,0-170,0 300 25,0

AC-Nr. 4 394 527

900 161,0

925

800 151,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 541

1050 202,0-210,5

1060-1080

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5

1010-1030

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0

1060-80

900 256,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 564

1050 244,0

1070

900 234,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 569

1000 203,0-211,5

1010-1030

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0

1060-1080

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 593

1050 251,5-261,5

1060-1080

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0

1060-1080

900 267,0-278,0  
700 267,0-278,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 705/706

Checking values in brackets

En 1050 258,0

1060-80

900 256,0

100 130,0-170,0 300 19,0-25,0

\* 1 mm less control rod travel than col. 2

Testoil-ISO 4113

**C. Settings for Fuel Injection Pump with Fitted Governor:**

|   |                               |                |  |                               |  |                               |                    |                       |
|---|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics<br>high idle speed (5b) (5a) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min (4a)   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 707

1050 244,0 1070 900 234,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 800 196,0-210,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 394 719

875 166,0-168,0 915 600 142,5-146,5 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 394 733

1000 255,0-261,0 1020 800 272,0-278,0 100 130,0-170,0 300 19,0-25,0  
600 270,0-276,0

AC-Nr. 4 394 740/741

1020 213,0-226,0 1030-1040 915 208,0-218,0

AC-Nr. 4 394 744

1050 250,0 1060-1080 900 256,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 745

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 394 746

875 161,0-165,0 890 600 140,0-144,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 771

800 113,0-119,0 820 600 102,0-108,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 773

800 125,0-131,0 820 600 134,0-140,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 775

1025 192,0-198,0 1045 900 180,0-186,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 777

1000 200,0-206,0 1020 800 180,0-186,0 100 130,0-170,0 300 19,0-25,0  
600 189,0-195,0

AC-Nr. 4 394 779

940 185,0-195,0 955-65 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 781

1025 230,0-236,0 1040 900 207,0-213,0 100 130,0-170,0 300 19,0-25,0  
700 209,0-215,0

AC-Nr. 4 394 783

1000 227,0-233,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
Checking values in brackets \* 1 mm less control rod travel than col. 2

En

**Testoil-ISO 4113**

**C. Settings for Fuel Injection Pump with Fitted Governor**

|   |                               |                |  |                               |  |                               |                    |                       |
|---|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min (4a)   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

|                  |             |      |     |             |     |             |     |           |
|------------------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 785 |             |      |     |             |     |             |     |           |
| 1000             | 235,0-241,0 | 1020 | 700 | 263,0-269,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 787 |             |      |     |             |     |             |     |           |
| 1000             | 220,0-226   | 1020 | 800 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                  |             |      | 600 | 227,0-233,0 |     |             |     |           |
| AC-Nr. 4 394 789 |             |      |     |             |     |             |     |           |
| 910              | 190,0       | 930  |     |             | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 791 |             |      |     |             |     |             |     |           |
| 900              | 160,0-166,0 | 920  | 700 | 139,0-145,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 793 |             |      |     |             |     |             |     |           |
| 600              | 124,0-130,0 | 620  |     |             | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 795 |             |      |     |             |     |             |     |           |
| 700              | 127,0-133,0 | 720  | 600 | 124,0-130,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 797 |             |      |     |             |     |             |     |           |
| 800              | 139,0-145,0 | 820  | 600 | 124,0-130,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 799 |             |      |     |             |     |             |     |           |
| 925              | 157,0-163,0 | 945  | 800 | 145,0-151,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                  |             |      | 600 | 134,0-140,0 |     |             |     |           |
| AC-Nr. 4 394 801 |             |      |     |             |     |             |     |           |
| 1000             | 180,0-186,0 | 1020 | 800 | 154,0-160,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                  |             |      | 700 | 142,0-148,0 |     |             |     |           |
| AC-Nr. 4 394 803 |             |      |     |             |     |             |     |           |
| 1050             | 207,0-213,0 | 1070 | 900 | 161,0-175,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                  |             |      | 800 | 147,0-153,0 |     |             |     |           |
| AC-Nr. 4 394 805 |             |      |     |             |     |             |     |           |
| 900              | 187,0-193,0 | 920  | 700 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| AC-Nr. 4 394 807 |             |      |     |             |     |             |     |           |
| 900              | 200,0-206,0 | 920  | 700 | 184,0-190,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| AC-Nr. 4 394 809 |             |      |     |             |     |             |     |           |
| 900              | 203,0-209,0 | 920  | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 811 |             |      |     |             |     |             |     |           |
| 750              | 185,0-191,0 | 770  | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 813 |             |      |     |             |     |             |     |           |
| En 800           | 210,0-218,0 | 820  | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

\* 1 mm less control rod travel than col. 2

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**C. Settings for Fuel Injection Pump with Fitted Governor**

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Breakaway | Fuel delivery characteristics<br>high idle speed |                               | Starting fuel delivery<br>idle<br>switching point | Low idle speed                |         |                             |
|---|-------------------------------|-----------|--|-------------------------------|---|-------------------------------|---------|-----------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min | Control rod<br>travel<br>mm |
| 1   | 2                             | 3         | 4  | 5                             | 6   | 7                             | 8       | 9                           |
| AC-Nr. 4 394 815  |                               |           |  |                               |   |                               |         |                             |
| 1050  | 222,0-228,0                   | 1070      | 900<br>700                                       | 202,0-208,0<br>207,0-213,0    | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 817  |                               |           |  |                               |   |                               |         |                             |
| 1000  | 240,0-246,0                   | 1020      | 800<br>600                                       | 224,0-230,0<br>237,0-243,0    | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 819  |                               |           |  |                               |   |                               |         |                             |
| 1050  | 245,0-251,0                   | 1070      | 900<br>700                                       | 224,0-230,0<br>237,0-243,0    | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 821  |                               |           |  |                               |   |                               |         |                             |
| 1000  | 217,0-223,0                   | 1020      | 800<br>600                                       | 197,0-203,0<br>219,0-225,0    | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 823  |                               |           |  |                               |   |                               |         |                             |
| 900   | 210,0-216,0                   | 920       | 700  | 212,0-218,0                   | 100   | 130,0-170,0                   | 300     | 27,0-33,0                   |
| AC-Nr. 4 394 825  |                               |           |  |                               |   |                               |         |                             |
| 1050  | 269,0-275,0                   | 1070      | 900<br>700                                       | 281,0-287,0<br>293,0-299,0    | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 827  |                               |           |  |                               |   |                               |         |                             |
| 1050  | 234,0-240,0                   | 1070      | 900<br>700                                       | 246,0-252,0<br>268,0-274,0    | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 829  |                               |           |  |                               |   |                               |         |                             |
| 1050  | 262,0-268,0                   | 1070      | 900<br>700                                       | 279,0-285,0<br>289,0-295,0    | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 831  |                               |           |  |                               |   |                               |         |                             |
| 1050  | 241,0-247,0                   | 1070      | 900<br>700                                       | 265,0-271,0<br>268,0-274,0    | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 833  |                               |           |  |                               |   |                               |         |                             |
| 900   | 232,0-238,0                   | 920       | 700  | 253,0-259,0                   | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 835  |                               |           |  |                               |   |                               |         |                             |
| 750   | 244,0-250,0                   | 770       | 700  | 253,0-259,0                   | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 837  |                               |           |  |                               |   |                               |         |                             |
| 800   | 239,0-245,0                   | 820       | 600  | 248,0-254,0                   | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 839  |                               |           |  |                               |   |                               |         |                             |
| 1000  | 212,0-218,0                   | 1020      | 800  | 230,0-236,0                   | 100   | 130,0-170,0                   | 300     | 19,0-25,0                   |
| AC-Nr. 4 394 841  |                               |           |  |                               |   |                               |         |                             |
| 900   | 288,0-294,0                   | 920       | 700  | 287,0-293,0                   | 100   | 130,0-170,0                   | 300     | 27,0-33,0                   |

AC-Nr. 4 394 841

Checking values in brackets

\* 1 mm less control rod travel than col. 2

AC-Nr.  
Checking values in brackets

\* 1 mm less control rod travel than col. 2

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**C. Settings for Fuel Injection Pump with Fitted Governor**

|   |                  |                |  |                  |  |                  |                    |                       |
|---|------------------|----------------|--|------------------|--|------------------|--------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
| rev/min   | cm³/1000 strokes | rev/min (4a)   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3              | 4  | 5                | 6  | 7                | 8                  | 9                     |

AC-Nr. 4 394 843

|      |           |      |     |             |     |             |     |           |
|------|-----------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 255,0-261 | 1020 | 800 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |           |      | 600 | 270,0-276,0 |     |             |     |           |

AC-Nr. 4 394 845

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 239,0-245,0 | 1070 | 900 | 233,0-239,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 273,0-279,0 |     |             |     |           |

AC-Nr. 4 394 847

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 215,0-221,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 220,0-226,0 |     |             |     |           |

AC-Nr. 4 394 849

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 222,0-228,0 | 920 | 700 | 254,0-260,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 851

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 257,0-263,0 | 1070 | 750 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 853

|      |             |      |     |             |     |             |     |      |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|
| 1050 | 295,0-303,0 | 1075 | 900 | 309,0-315,0 | 100 | 130,0-170,0 | 300 | 25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|

AC-Nr. 4 394 857

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 267,0-273,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 267,0-273,0 |     |             |     |           |

AC-Nr. 4 394 861

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 | 900 | 301,0-307,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 309,0-315,0 |     |             |     |           |

AC-Nr. 4 394 863

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 | 900 | 252,0-258,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 865

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-236,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 394 867

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 869

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 | 800 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|     |             |     | 700 | 177,0-183,0 |     |             |     |           |

AC-Nr. 4 394 871

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 | 800 | 160,0-166,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 873

Checking values in brackets  
En 925 237,0-243,0

|     |     |             |     |             |     |           |
|-----|-----|-------------|-----|-------------|-----|-----------|
| 945 | 800 | 251,0-257,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|     | 700 | 269,0-275,0 |     |             |     |           |

\* 1 mm less control rod travel than col. 2

**Testoil-ISO 4113**

# C. Settings for Fuel Injection Pump with Fitted Governor

ALO 11,0 a -15-

|   |                               |                |  |                               |   |                               |                    |                             |
|---|-------------------------------|----------------|--|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics<br>high idle speed (5b) (5a) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min (4a)   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3              | 4  | 5                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 394 875

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 877

1050 213,0-219,0 1060-1080 900 212,0-218,0 100 130,0-170,0 300 19,0-25,0  
700 240,0-246,0

AC-Nr. 4 394 879

1050 211,0-220,0 1055-1075 975 237,5-247,0 100 130,0-170,0 300 19,0-25,0  
700 258,5-269,5  
600 255,5-266,0

AC-Nr. 4 394 881

700 246,0 720 600 263,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 883

1050 244,5 1060-1080 254,5 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 885

600 258,0 100 130,0-170,0 300 27,0

AC-Nr. 4 394 891

600 167,0-175,0 620 100 130,0-170,0 300 25,0

AC-Nr. 4 394 893

900 259,0-267,0 925 700 238,0-246,0 100 130,0-170,0 300 19,0-29,0

AC-Nr. 4 394 895

1000 188,0-196,0 1025 800 180,0-187,0 100 130,0-170,0 300 25,0

AC-Nr. 4 394 897

850 189,0-197,0 875 750 185,0-193,0 100 130,0-170,0 325 30,0

AC-Nr. 4 394 890

900 175,0 925 700 158,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 905

1000 239,0-247,0 1025 700 229,0-235,0 100 130,0-170,0 300 25,0

AC-Nr. 4 394 907

900 161,0 925 800 151,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 909

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 911

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0  
\* 1 mm less control rod travel than col. 2

En AC-Nr. 4 394 915

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

Testoil-ISO 4113

**C. Settings for Fuel Injection Pump with Fitted Governor**

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Brezkaway (2b) | Fuel delivery characteristics<br>high idle speed (5b) |                               | (5a) | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                       | (1) |
|---|-------------------------------|----------------|---|-------------------------------|------|---|-------------------------------|--------------------|-----------------------|-----|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min   | cm <sup>3</sup> /1000 strokes |      | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |     |
| 1   | 2                             | 3              | 4   | 5                             |      | 6   | 7                             | 8                  | 9                     |     |
| AC-Nr. 4 394 917  |                               |                |   |                               |      |   |                               |                    |                       |     |
| 1050  | 260,5-271,0                   | 1060-1080      |   |                               |      | 100   | 130,0-170,0                   | 300                | 19,0-25,0             |     |
| AC-Nr. 4 394 919  |                               |                |   |                               |      |   |                               |                    |                       |     |
| 1050  | 215,5-261,5                   | 1060-1080      |   |                               |      | 100   | 130,0-170,0                   | 300                | 19,0-25,0             |     |
| AC-Nr. 4 394 921  |                               |                |   |                               |      |   |                               |                    |                       |     |
| 1050  | 260,5-271,0                   | 1060-1080      | 900   | 267,0-278,0                   |      | 100   | 130,0-170,0                   | 300                | 19,0-25,0             |     |
|   |                               |                | 700   | 267,0-278,0                   |      |   |                               |                    |                       |     |
| AC-Nr. 4 394 925  |                               |                |   |                               |      |   |                               |                    |                       |     |
| 1050  | 244,0                         | 1070           | 900   | 234,0                         |      | 100   | 130,0-170,0                   | 300                | 19,0-25,0             |     |
| AC-Nr. 4 394 997  |                               |                |   |                               |      |   |                               |                    |                       |     |
| 900   | 173,0-179,0                   | 920            | 800   | 160,0-166,0                   |      | 100   | 130,0-170,0                   | 300                | 19,0-25,0             |     |

**Testoil-ISO 4113**

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

①

# Test Specifications Fuel Injection Pumps ① and Governors

40

WPP 001/4 ALO 16,0 a

1. Edition

En

PE 6 P 120/420 LS 152

RQV 300-1025 PA 112 KR

0 401 846 180

1 - 5 - 3 - 6 - 2 - 4 (60°)

Calibrating nozzle-and-holder assembly 0 681 443 022

Test-pressure line

9 681 230 703

supersedes

company Allis-Chalmers

engine 16000-2500

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,80+0,1 mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning (torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|---|
| 1000                             | 12                            | 26,4-27,1  | 1,0   |                               |  |   |
| 600                              | 6                             | 8,6- 9,1   |   |                               |  |   |
|                                  | 12                            | 26,3-28,2  |   |                               |  |   |
|                                  | 15                            | 33,8-36,2  |   |                               |  |   |
| 200                              | 6                             | 4,2- 5,2   |   |                               |  |   |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

| Upper rated speed                          |  |  | Intermediate rated speed                   |              |                               | Lower rated speed                          |              |                               | Sliding sleeve travel |          |
|--|--|--|--|--------------|-------------------------------|--|--------------|-------------------------------|-----------------------|----------|
| Degree of deflection of control lever<br>1 | rev/min<br>Control rod travel<br>mm<br>2 | Control rod travel<br>mm<br>rev/min<br>3 | Degree of deflection of control lever<br>4 | rev/min<br>5 | Control rod travel<br>mm<br>6 | Degree of deflection of control lever<br>7 | rev/min<br>8 | Control rod travel<br>mm<br>9 | rev/min<br>10         | mm<br>11 |
| 66°  | 1050                                     | 15 - 18                                  |  |              |                               | 10°  | 250          | 6,4-8,0                       |                       |          |
|  | 1100                                     | 10,7- 15                                 |  |              |                               |  | 350          | 3,0-5,2                       |                       |          |
|  | 1150                                     | 6,0-11,6                                 |  |              |                               |  | 450          | 1,3-2,8                       |                       |          |
|  | 1210                                     | 0,7                                      |  |              |                               |  | 550          | 0                             |                       |          |
|  | 1300                                     | 0  |  |              |                               |  |              |                               |                       |          |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                                    | Rotational-speed limitation<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                                    | Starting fuel delivery<br>Idle switching point ⑥ |                                    | Torque-control travel ⑤ |                               |
|---|------------------------------------|--|--|------------------------------------|--|------------------------------------|-------------------------|-------------------------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3   | rev/min<br>4   | cm <sup>3</sup> /1000 strokes<br>5 | rev/min<br>6                                     | cm <sup>3</sup> /1000 strokes<br>7 | rev/min<br>8            | Control rod travel<br>mm<br>9 |
|   |                                    |  |  |                                    |  |                                    |                         |                               |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

Testoil-ISO 4113

BOSCH

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C15

C15

# C. Settings for Fuel Injection Pump with Fitted Governor

ALO 16,0 a -2-

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                            | Starting fuel delivery<br>idle<br>switching point (6) | Low idle speed (5) |           | (1)                         |
|---|------------------|----------------|--|----------------------------|---|--------------------|-----------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min        | rev/min  | cm³/1000 strokes           | rev/min   | cm³/1000 strokes   | rev/min   | Control rod<br>travel<br>mm |
| 1   | 2                | 3              | 4  | 5                          | 6   | 7                  | 8         | 9                           |
| AC-Nr. 4 392 715  |                  |                |  |                            |   |                    |           |                             |
| 1050  | 187,0-193,0      | 1070           | 900<br>700   | 174,0-180,0<br>175,0-181,0 | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 717  |                  |                |  |                            |   |                    |           |                             |
| 1050  | 224,0-230,0      | 1070           | 800  | 185,0-191,0                | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 719  |                  |                |  |                            |   |                    |           |                             |
| 1050  | 200,0-206,0      | 1070           | 900<br>700   | 190,0-196,0<br>214,0-220,0 | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 721  |                  |                |  |                            |   |                    |           |                             |
| 1050  | 242,0-248,0      | 1070           | 900<br>700   | 220,0-226,0<br>230,0-236,0 | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 723  |                  |                |  |                            |   |                    |           |                             |
| 750   | 244,0-250,0      | 770            | 700  | 253,0-259,0                | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 725  |                  |                |  |                            |   |                    |           |                             |
| 800   | 239,0-245,0      | 820            | 600  | 248,0-254,0                | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 727  |                  |                |  |                            |   |                    |           |                             |
| 900   | 232,0-238,0      | 920            | 700  | 253,0-259                  | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 729  |                  |                |  |                            |   |                    |           |                             |
| 1000  | 212,0-218,0      | 1020           | 800  | 230,0-236,0                | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 731  |                  |                |  |                            |   |                    |           |                             |
| 900   | 288,0-294,0      | 920            | 700  | 287,0-293,0                | 100   | 130,0-170,0        | 300       | 27,0-33,0                   |
| AC-Nr. 4 392 735  |                  |                |  |                            |   |                    |           |                             |
| 1050  | 239,0-245,0      | 1070           | 900<br>700   | 233,0-239,0<br>273,0-279,0 | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 737  |                  |                |  |                            |   |                    |           |                             |
| 1000  | 215,0-221,0      | 1020           | 800<br>600   | 197,0-203,0<br>220,0-226,0 | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 739  |                  |                |  |                            |   |                    |           |                             |
| 1050  | 207,0-213,0      | 1070           | 900<br>700   | 195,0-201,0<br>225,0-231,0 | 100   | 130,0-170,0        | 300       | 19,0-25,0                   |
| AC-Nr. 4 392 741  |                  |                |  |                            |   |                    |           |                             |
| 1050  | 213,0-219,0      | 1070           | 900<br>700   | 202,0-208,0<br>230,0-236,0 | 100   | 130,0-170,0        |           |                             |
| AC-Nr. 4 392 743  |                  |                |  |                            |   |                    |           |                             |
| 1050  | 220,0-226,0      | 1070           | 900<br>700   | 210,0-216,0<br>243,0-249,0 | 100   | 130,0-170,0        | 19,0-25,0 | 19,0-25,0                   |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

ALO 16,0 a -3-

|   |                               |                |  |                               |   |                               |                    |                             |
|---|-------------------------------|----------------|--|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min (4a)   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3              | 4  | 5                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 392 747

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 227,0-233,0 | 1070 | 900 | 208,0-214,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 247,0-253,0 |     |             |     |           |

AC-Nr. 4 392 749

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 392 750

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 392 768

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 123,0-133,0 | 820 | 600 | 132,0-142,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 775/..776

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 875 | 162,0-164,0 | 890 | 600 | 140,0-144,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 777

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 205,0-207,0 | 970 | 700 | 195,0-199,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 778

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 779

|      |             |         |      |             |     |             |     |           |
|------|-------------|---------|------|-------------|-----|-------------|-----|-----------|
| 1025 | 190,0-200,0 | 1030-40 | 1000 | 191,0-201,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 900  | 178,0-188,0 |     |             |     |           |

AC-Nr. 4 392 781

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1025 | 228,0-238,0 | 1050-60 | 900 | 205,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 207,0-217,0 |     |             |     |           |

AC-Nr. 4 392 953

|     |             |        |  |  |     |             |     |           |
|-----|-------------|--------|--|--|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 393 095

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-221,0 | 1060-80 | 900 | 210,0-220,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 238,0-248,0 |     |             |     |           |

AC-Nr. 4 393 307

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 210,0-216,0 | 920 | 700 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 393 431

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 393 821

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 242,0-248,0 | 1070 | 900 | 220,0-226,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 230,0-236,0 |     |             |     |           |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

**Testoil-ISO 4113**

# C. Settings for Fuel Injection Pump with Fitted Governor

ALO 16,0 a -4-

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 393 823

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 393 825

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 827

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 393 829

1050 230,0-234,0 1070 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 831

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0  
700 230,0-236,0

AC-Nr. 4 393 833

1050 264,0 1060-1080 900 280,5 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 835

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

AC-Nr. 4 393 837

1050 227,0-233,0 1070 900 208,0-214,0 100 130,0-170,0 300 19,0-25,0  
700 247,0-253,0

AC-Nr. 4 393 890

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 393 891

955 208,0 965-975 895 203,0

AC-Nr. 4 393 961

900 181,0-187,0 920 700 172,0-178,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 001

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 017

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 394 020

700 249,0-257,0 725 600 258,0-264,0 100 130,0-170,0 300 19,0-29,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

Testoil-ISO 4113



**C. Settings for Fuel Injection Pump with Fitted Governor**

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (3) |                       |
|---|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8                  | 9                     |
| AC-Nr. 4 393 890  |                               |                |  |                               |  |                               |                    |                       |
| 950   | 208,0-214,0                   | 990            | 750  | 196,0-202,0                   | 100  | 130,0-170,0                   | 300                | 21,0-27,0             |
| AC-Nr. 4 393 891  |                               |                |  |                               |  |                               |                    |                       |
| 955   | 208,0                         | 965-975        | 895  | 203,0                         |  |                               |                    |                       |
| AC-Nr. 4 393 961  |                               |                |  |                               |  |                               |                    |                       |
| 900   | 181,0-187,0                   | 920            | 700  | 172,0-178,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 001  |                               |                |  |                               |  |                               |                    |                       |
| 700   | 218,0-224,0                   | 720            | 600  | 240,0-246,0                   | 100  | 130,0-170,0                   | 300                | 27,0-33,0             |
| AC-Nr. 4 394 017  |                               |                |  |                               |  |                               |                    |                       |
| 950   | 208,0-214,0                   | 990            | 750  | 196,0-202,0                   | 100  | 130,0-170,0                   | 300                | 21,0-27,0             |
| AC-Nr. 4 394 020  |                               |                |  |                               |  |                               |                    |                       |
| 700   | 249,0-257,0                   | 725            | 600  | 258,0-264,0                   | 100  | 130,0-170,0                   | 300                | 19,0-29,0             |
| AC-Nr. 4 394 062  |                               |                |  |                               |  |                               |                    |                       |
| 800   | 113,0-119,0                   | 820            | 600  | 102,0-108,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 064  |                               |                |  |                               |  |                               |                    |                       |
| 375   | 161,0-165,0                   | 890            | 600  | 140,0-144,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 066  |                               |                |  |                               |  |                               |                    |                       |
| 800   | 125,0-131,0                   | 820            | 600  | 134,0-140,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 068  |                               |                |  |                               |  |                               |                    |                       |
| 1025  | 192,0-198,0                   | 1045           | 900  | 180,0-186,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 070  |                               |                |  |                               |  |                               |                    |                       |
| 1000  | 200,0-206,0                   | 1020           | 800  | 180,0-186,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
|   |                               |                | 600  | 189,0-195,0                   |  |                               |                    |                       |
| AC-Nr. 4 394 072  |                               |                |  |                               |  |                               |                    |                       |
| 940   | 185,0-195,0                   | 955-65         |  |                               | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 074  |                               |                |  |                               |  |                               |                    |                       |
| 1025  | 230,0-236,0                   | 1040           | 900  | 207,0-213,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
|   |                               |                | 700  | 209,0-215,0                   |  |                               |                    |                       |
| AC-Nr. 4 394 076  |                               |                |  |                               |  |                               |                    |                       |
| 1000  | 227,0-233,0                   | 1020           | 800  | 197,0-203,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 078  |                               |                |  |                               |  |                               |                    |                       |
| 1000  | 235,0-241,0                   | 1020           | 700  | 263,0-269,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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**Testoil-ISO 4113**

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|--|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min  | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1  | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

|                             |             |      |     |             |     |             |     |           |
|-----------------------------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 080            |             |      |     |             |     |             |     |           |
| 1000                        | 220,0-226,0 | 1020 | 800 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                             |             |      | 600 | 227,0-233,0 |     |             |     |           |
| AC-Nr. 4 394 082            |             |      |     |             |     |             |     |           |
| 910                         | 190,0       | 930  |     |             | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 084            |             |      |     |             |     |             |     |           |
| 900                         | 160,0-166,0 | 920  | 700 | 139,0-145,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 086            |             |      |     |             |     |             |     |           |
| 600                         | 124,0-130,0 | 620  |     |             | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 088            |             |      |     |             |     |             |     |           |
| 700                         | 127,0-133,0 | 720  | 600 | 124,0-130,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 090            |             |      |     |             |     |             |     |           |
| 800                         | 139,0-145,0 | 820  | 600 | 124,0-130,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 092            |             |      |     |             |     |             |     |           |
| 925                         | 157,0-163,0 | 945  | 800 | 145,0-151,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                             |             |      | 600 | 134,0-140,0 |     |             |     |           |
| AC-Nr. 4 394 094            |             |      |     |             |     |             |     |           |
| 1000                        | 180,0-186,0 | 1020 | 800 | 154,0-160,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                             |             |      | 700 | 142,0-148,0 |     |             |     |           |
| AC-Nr. 4 394 096            |             |      |     |             |     |             |     |           |
| 1050                        | 207,0-213,0 | 1070 | 900 | 161,0-175,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                             |             |      | 800 | 147,0-153,0 |     |             |     |           |
| AC-Nr. 4 394 098            |             |      |     |             |     |             |     |           |
| 900                         | 187,0-193,0 | 920  | 700 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| AC-Nr. 4 394 100            |             |      |     |             |     |             |     |           |
| 900                         | 200,0-206,0 | 920  | 700 | 184,0-190,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| AC-Nr. 4 394 102            |             |      |     |             |     |             |     |           |
| 900                         | 203,0-209,0 | 920  | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 104            |             |      |     |             |     |             |     |           |
| 750                         | 185,0-191,0 | 770  | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 106            |             |      |     |             |     |             |     |           |
| 800                         | 210,0-218,0 | 820  | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 108            |             |      |     |             |     |             |     |           |
| Checking values in brackets |             |      |     |             |     |             |     |           |
| En 1050                     | 222,0-228,0 | 1070 | 900 | 202,0-208,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                             |             |      | 700 | 207,0-213,0 |     |             |     |           |

\* 1 mm less control rod travel than col. 2

**Testoil-ISO 4113**

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤ |                       |
|---|------------------|--------------|--|------------------|--|------------------|------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min      | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3            | 4  | 5                | 6  | 7                | 8                | 9                     |
| AC-Nr. 4 394 110  |                  |              |  |                  |  |                  |                  |                       |
| 1000  | 240,0-246,0      | 1020         | 800  | 224,0-230,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
|   |                  |              | 600  | 237,0-243,0      |  |                  |                  |                       |
| AC-Nr. 4 394 112  |                  |              |  |                  |  |                  |                  |                       |
| 1050  | 245,0-251,0      | 1070         | 900  | 224,0-230,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
|   |                  |              | 700  | 237,0-243,0      |  |                  |                  |                       |
| AC-Nr. 4 394 114  |                  |              |  |                  |  |                  |                  |                       |
| 1000  | 217,0-223,0      | 1020         | 800  | 197,0-203,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
|   |                  |              | 600  | 219,0-225,0      |  |                  |                  |                       |
| AC-Nr. 4 394 116  |                  |              |  |                  |  |                  |                  |                       |
| 900   | 210,0-216,0      | 920          | 700  | 212,0-218,0      | 100  | 130,0-170,0      | 300              | 27,0-33,0             |
| AC-Nr. 4 394 118  |                  |              |  |                  |  |                  |                  |                       |
| 1050  | 269,0-275,0      | 1070         | 900  | 281,0-287,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
|   |                  |              | 700  | 293,0-299,0      |  |                  |                  |                       |
| AC-Nr. 4 394 120  |                  |              |  |                  |  |                  |                  |                       |
| 1050  | 234,0-240,0      | 1070         | 900  | 246,0-252,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
|   |                  |              | 700  | 268,0-274,0      |  |                  |                  |                       |
| AC-Nr. 4 394 122  |                  |              |  |                  |  |                  |                  |                       |
| 1050  | 262,0-268,0      | 1070         | 900  | 279,0-285,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
|   |                  |              | 700  | 289,0-295,0      |  |                  |                  |                       |
| AC-Nr. 4 394 124  |                  |              |  |                  |  |                  |                  |                       |
| 1050  | 241,0-247,0      | 1070         | 900  | 265,0-271,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
|   |                  |              | 700  | 268,0-274,0      |  |                  |                  |                       |
| AC-Nr. 4 394 126  |                  |              |  |                  |  |                  |                  |                       |
| 900   | 232,0-238,0      | 920          | 700  | 253,0-259,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
| AC-Nr. 4 394 128  |                  |              |  |                  |  |                  |                  |                       |
| 750   | 244,0-250,0      | 770          | 700  | 253,0-259,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
| AC-Nr. 4 394 130  |                  |              |  |                  |  |                  |                  |                       |
| 800   | 239,0-245,0      | 820          | 600  | 248,0-254,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
| AC-Nr. 4 394 132  |                  |              |  |                  |  |                  |                  |                       |
| 1000  | 212,0-218,0      | 1020         | 800  | 230,0-236,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
| AC-Nr. 4 394 134  |                  |              |  |                  |  |                  |                  |                       |
| 900   | 288,0-294,0      | 920          | 700  | 287,0-293,0      | 100  | 130,0-170,0      | 300              | 27,0-33,0             |
| AC-Nr. 4 394 136  |                  |              |  |                  |  |                  |                  |                       |
| 1000  | 255,0-261,0      | 1020         | 800  | 272,0-278,0      | 100  | 130,0-170,0      | 300              | 19,0-25,0             |
|   |                  |              | 600  | 270,0-276,0      |  |                  |                  |                       |
| Checking values in brackets   |                  |              |  |                  |  |                  |                  |                       |
| * 1 mm less control rod travel than col. 2                              |                  |              |  |                  |  |                  |                  |                       |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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**C. Settings for Fuel Injection Pump with Fitted Governor**

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8                  | 9                     |
| AC-Nr. 4 394 138  |                               |                |  |                               |  |                               |                    |                       |
| 1050  | 239,0-245,0                   | 1070           | 900<br>700   | 233,0-239,0<br>273,0-279,0    | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 140  |                               |                |  |                               |  |                               |                    |                       |
| 1000  | 215,0-221,0                   | 1020           | 800<br>600   | 197,0-203,0<br>220,0-226,0    | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 142  |                               |                |  |                               |  |                               |                    |                       |
| 900   | 222,0-228,0                   | 920            | 700  | 254,0-260,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 144  |                               |                |  |                               |  |                               |                    |                       |
| 1050  | 257,0-263,0                   | 1070           | 750  | 272,0-278,0                   | 100  | 130,0-170,0                   | 300                | 27,0-33,0             |
| AC-Nr. 4 394 148  |                               |                |  |                               |  |                               |                    |                       |
| 1050  | 295,0-303,0                   | 1075           | 900  | 309,0-315,0                   | 100  | 130,0-170,0                   | 300                | 25,0                  |
| AC-Nr. 4 394 150  |                               |                |  |                               |  |                               |                    |                       |
| 1050  | 268,0-274,0                   | 1070           | 900<br>700   | 274,0-280,0<br>280,0-286,0    | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 152  |                               |                |  |                               |  |                               |                    |                       |
| 1050  | 262,0-268,0                   | 1070           | 900<br>700   | 267,0-273,0<br>267,0-273,0    | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 154  |                               |                |  |                               |  |                               |                    |                       |
| 1050  | 279,0-285,0                   | 1070           | 900<br>700   | 283,0-289,0<br>293,0-299,0    | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 156  |                               |                |  |                               |  |                               |                    |                       |
| 1050  | 296,0-302,0                   | 1070           | 900<br>700   | 301,0-307,0<br>309,0-315,0    | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 157/158  |                               |                |  |                               |  |                               |                    |                       |
| 1050  | 253,0-256,0                   | 1070           | 900<br>700   | 252,0-258,0<br>269,0-275,0    | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 160  |                               |                |  |                               |  |                               |                    |                       |
| 1050  | 208,0-214,0                   | 1070           | 900<br>700   | 230,0-235,0<br>260,0-266,0    | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 162  |                               |                |  |                               |  |                               |                    |                       |
| 900   | 181,0-187,0                   | 920            | 700  | 172,0-178,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 164  |                               |                |  |                               |  |                               |                    |                       |
| 925   | 176,0-182,0                   | 945            | 800<br>700   | 162,0-168,0<br>177,0-183,0    | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |
| AC-Nr. 4 394 166  |                               |                |  |                               |  |                               |                    |                       |
| 900   | 173,0-179,0                   | 920            | 800  | 160,0-166,0                   | 100  | 130,0-170,0                   | 300                | 19,0-25,0             |

Checking values in brackets

En

\* 1 mm less control rod travel than col. 2

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |                |  |                               |   |                               |                    |                             |
|---|-------------------------------|----------------|--|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min (4a)   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3              | 4  | 5                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 394 168

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 | 800 | 251,0-257,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|     |             |     | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 170

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 176

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1070 | 900 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 240,0-248,0 |     |             |     |           |

AC-Nr. 4 394 246

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |     |           |
|      |             |           | 600 | 255,5-266,0 |     |             |     |           |

AC-Nr. 4 394 248

|     |       |     |     |       |     |             |     |           |
|-----|-------|-----|-----|-------|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 | 600 | 263,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------|-----|-----|-------|-----|-------------|-----|-----------|

AC-Nr. 4 394 250

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 257

|     |       |  |  |  |     |             |     |      |
|-----|-------|--|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 314

|      |       |      |     |       |     |             |     |           |
|------|-------|------|-----|-------|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 | 900 | 240,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |       |      | 700 | 267,0 |     |             |     |           |

AC-Nr. 4 394 331

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 | 900 | 265,0-271,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 268,0-274,0 |     |             |     |           |

AC-Nr. 4 394 332

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 | 900 | 274,0-280,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 280,0-286,0 |     |             |     |           |

AC-Nr. 4 394 347

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 | 900 | 281,0-287,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

AC-Nr. 4 394 348

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 | 900 | 246,0-252,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 268,0-274,0 |     |             |     |           |

AC-Nr. 4 394 349

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-236,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

Checking values in brackets

En

\* 1 mm less control rod travel than col. 2

## Testoil-ISO 4113

**C. Settings for Fuel Injection Pump with Fitted Governor**

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 350

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 279,0-285,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 289,0-295,0 |     |             |     |           |

AC-Nr. 4 394 351

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 | 900 | 252,0-258,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 352

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 267,0-273,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 267,0-273,0 |     |             |     |           |

AC-Nr. 4 394 353

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 | 900 | 283,0-289,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

AC-Nr. 4 394 354

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 | 900 | 301,0-307,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 309,0-315,0 |     |             |     |           |

AC-Nr. 4 394 356

|      |       |      |     |       |     |             |     |           |
|------|-------|------|-----|-------|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 | 900 | 240,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |       |      | 700 | 267,0 |     |             |     |           |

AC-Nr. 4 394 386

|     |             |  |  |  |     |             |     |      |
|-----|-------------|--|--|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 |  |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 390

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 | 700 | 238,0-246,0 | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 428

|      |             |      |     |             |     |             |     |      |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 | 800 | 180,0-187,0 | 100 | 130,0-170,0 | 300 | 25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|

AC-Nr. 4 394 473

|     |             |     |     |             |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 | 750 | 185,0-193,0 | 100 | 130,0-170,0 | 325 | 30,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|------|

AC-Nr. 4 394 501

|     |       |     |     |       |     |             |     |           |
|-----|-------|-----|-----|-------|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 | 700 | 158,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------|-----|-----|-------|-----|-------------|-----|-----------|

AC-Nr. 4 394 521

|      |             |      |     |             |     |             |     |      |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 | 700 | 229,0-235,0 | 100 | 130,0-170,0 | 300 | 25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|

AC-Nr. 4 394 527

|     |       |     |     |       |     |             |     |           |
|-----|-------|-----|-----|-------|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 | 800 | 151,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------|-----|-----|-------|-----|-------------|-----|-----------|

AC-Nr. 4 394 541

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 202,0-210,5 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

Checking values in brackets

En AC-Nr. 4 394 550

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1000 | 230,5-239,5 | 1010-1030 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

ALO 16,0 a -11-

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤<br>Control rod travel mm |   |
|---|------------------|---------------------------------------|--|------------------|--|------------------|---|---|
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                   |   |
| 1   | 2                | 3                                     | 4  | 5                | 6  | 7                | 8   | 9 |

|                      |             |           |     |             |     |             |     |           |
|----------------------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 561     |             |           |     |             |     |             |     |           |
| 1050                 | 258,0       | 1060-80   | 900 | 256,0       | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 564     |             |           |     |             |     |             |     |           |
| 1050                 | 244,0       | 1070      | 900 | 234,0       | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 569     |             |           |     |             |     |             |     |           |
| 1000                 | 203,0-211,5 | 1010-1030 |     |             | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 590     |             |           |     |             |     |             |     |           |
| 1050                 | 260,5-271,0 | 1060-1080 |     |             | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 593     |             |           |     |             |     |             |     |           |
| 1050                 | 251,5-261,5 | 1060-1080 |     |             | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 703     |             |           |     |             |     |             |     |           |
| 1050                 | 260,5-271,0 | 1060-1080 | 900 | 267,0-278,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                      |             |           | 700 | 267,0-278,0 |     |             |     |           |
| AC-Nr. 4 394 705/706 |             |           |     |             |     |             |     |           |
| 1050                 | 258,0       | 1060-80   | 900 | 256,0       | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 707     |             |           |     |             |     |             |     |           |
| 1050                 | 244,0       | 1070      | 900 | 234,0       | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 718     |             |           |     |             |     |             |     |           |
| 955                  | 198,0-213,0 | 965-975   | 800 | 196,0-210,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| AC-Nr. 4 394 719     |             |           |     |             |     |             |     |           |
| 875                  | 166,0-168,0 | 915       | 600 | 142,5-146,5 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| AC-Nr. 4 394 733     |             |           |     |             |     |             |     |           |
| 1000                 | 255,0-261,0 | 1020      | 800 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                      |             |           | 600 | 270,0-276,0 |     |             |     |           |
| AC-Nr. 4 394 740/741 |             |           |     |             |     |             |     |           |
| 1020                 | 213,0-226,0 | 1030-1040 | 915 | 208,0-218,0 |     |             |     |           |
| AC-Nr. 4 394 744     |             |           |     |             |     |             |     |           |
| 1050                 | 258,0       | 1060-1080 | 900 | 256,0       | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 745     |             |           |     |             |     |             |     |           |
| 950                  | 208,0-214,0 | 990       | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| AC-Nr. 4 394 746     |             |           |     |             |     |             |     |           |
| 875                  | 161,0-165,0 | 890       | 600 | 140,0-144,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| En AC-Nr. 4 394 771  |             |           |     |             |     |             |     |           |
| 800                  | 113,0-119,0 | 820       | 600 | 102,0-108,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 773

800 125,0-131,0 820 600 134,0-140,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 775

1025 192,0-198,0 1045 900 180,0-186,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 777

1000 200,0-206,0 1020 800 180,0-186,0 100 130,0-170,0 300 19,0-25,0  
600 189,0-195,0

AC-Nr. 4 394 779

940 185,0-195,0 955-65 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 781

1025 230,0-236,0 1040 900 207,0-213,0 100 130,0-170,0 300 19,0-25,0  
700 209,0-215,0

AC-Nr. 4 394 783

1000 227,0-233,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 785

1000 235,0-241,0 1020 700 263,0-269,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 787

1000 220,0-226,0 1020 800 209,0-215,0 100 130,0-170,0 300 19,0-25,0  
600 227,0-233,0

AC-Nr. 4 394 789

910 190,0 930 100 130,-170,0 300 25,0

AC-Nr. 4 394 791

900 160,0-166,0 920 700 139,0-145,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 793

600 124,0-130,0 620 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 795

700 127,0-133,0 720 600 124,0-130,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 797

800 139,0-145,0 820 600 124,0-130,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 799

925 157,0-163,0 945 800 145,0-151,0 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

AC-Nr. 4 394 801  
Checking values in brackets

En 1000 180,0-186,0 1020 800 154,0-160,0 100 130,0-170,0 300 19,0-25,0  
700 142,0-148,0

\* 1 mm less control rod travel than col. 2

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# C. Settings for Fuel Injection Pump with Fitted Governor

ALO 16,0 a -13-

|   |                               |                |  |                               |  |                               |  |    |
|---|-------------------------------|----------------|--|-------------------------------|--|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                  | mm |
| 1   | 2                             | 3              | 4  | 5                             | 6  | 7                             | 8  | 9  |

AC-Nr. 4 394 799

925 157,0-163,0 945 800 145,0-151,0 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

1000 180,0-186,0 1020 800 154,0-160,0 100 130,0-170,0 300 19,0-25,0  
700 142,0-148,0

AC-Nr. 4 394 803

1050 207,0-213,0 1070 900 161,0-175,0 100 130,0-170,0 300 19,0-25,0  
800 147,0-153,0

AC-Nr. 4 394 805

900 187,0-193,0 920 700 162,0-168,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 807

900 200,0-206,0 920 700 184,0-190,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 809

900 203,0-209,0 920 700 209,0-215,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 811

750 185,0-191,0 770 600 222,0-228 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0 820 600 223,0-229,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0 1070 900 202,0-208,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-213,0

AC-Nr. 4 394 817

1000 240,0-246,0 1020 800 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
600 237,0-243,0

AC-Nr. 4 394 819

1050 245,0-251,0 1070 900 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
700 237,0-243,0

AC-Nr. 4 394 821

1000 217,0-223,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 219,0-225,0

AC-Nr. 4 394 823

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0 1070 900 281,0-287,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

AC-Nr. 4 394 827

1050 234,0-240,0 1070 900 246,0-252,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|----------------|------------------------------------|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min                            | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3              | 4                                  | 5                             | 6  | 7                             | 8                  | 9                     |

|                             |             |      |            |                            |     |             |     |           |
|-----------------------------|-------------|------|------------|----------------------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 829            |             |      |            |                            |     |             |     |           |
| 1050                        | 262,0-268,0 | 1070 | 900<br>700 | 279,0-285,0<br>289,0-295,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 831            |             |      |            |                            |     |             |     |           |
| 1050                        | 241,0-247,0 | 1070 | 900<br>700 | 265,0-271,0<br>268,0-274,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 833            |             |      |            |                            |     |             |     |           |
| 900                         | 232,0-238,0 | 920  | 700        | 253,0-259,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 835            |             |      |            |                            |     |             |     |           |
| 750                         | 244,0-250,0 | 770  | 700        | 253,0-259,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 837            |             |      |            |                            |     |             |     |           |
| 800                         | 239,0-245,0 | 820  | 600        | 248,0-254,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 839            |             |      |            |                            |     |             |     |           |
| 1000                        | 212,0-218,0 | 1020 | 800        | 230,0-236,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 841            |             |      |            |                            |     |             |     |           |
| 900                         | 288,0-294,0 | 920  | 700        | 287,0-293,0                | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| AC-Nr. 4 394 843            |             |      |            |                            |     |             |     |           |
| 1000                        | 255,0-261,0 | 1020 | 800<br>600 | 272,0-278,0<br>270,0-276,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 845            |             |      |            |                            |     |             |     |           |
| 1050                        | 239,0-245,0 | 1070 | 900<br>700 | 233,0-239,0<br>273,0-279,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 847            |             |      |            |                            |     |             |     |           |
| 1000                        | 215,0-221,0 | 1020 | 800<br>600 | 197,0-203,0<br>220,0-226,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 849            |             |      |            |                            |     |             |     |           |
| 900                         | 222,0-228,0 | 920  | 700        | 254,0-260,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 851            |             |      |            |                            |     |             |     |           |
| 1050                        | 257,0-263,0 | 1070 | 750        | 272,0-278,0                | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| AC-Nr. 4 394 853            |             |      |            |                            |     |             |     |           |
| 1050                        | 295,0-303,0 | 1075 | 900        | 309,0-315,0                | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 857            |             |      |            |                            |     |             |     |           |
| 1050                        | 262,0-268,0 | 1070 | 900<br>700 | 267,0-273,0<br>267,0-273,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| Checking values in brackets |             |      |            |                            |     |             |     |           |
| AC-Nr. 4 394 861            |             |      |            |                            |     |             |     |           |
| 1050                        | 296,0-302,0 | 1070 | 900<br>700 | 301,0-307,0<br>309,0-315,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

\* 1 mm less control rod travel than col. 2

Testoil-ISO 4113

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
|---|-------------------------------|----------------|--|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min        | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3              | 4  | 5                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 394 863

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 | 900 | 252,0-258,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 865

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-236,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 394 867

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 869

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 | 800 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|     |             |     | 700 | 177,0-183,0 |     |             |     |           |

AC-Nr. 4 394 871

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 | 800 | 160,0-166,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 873

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 | 800 | 251,0-257,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|     |             |     | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 875

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 877

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1060-1080 | 900 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 240,0-246,0 |     |             |     |           |

AC-Nr. 4 394 879

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |     |           |
|      |             |           | 600 | 255,5-266,0 |     |             |     |           |

AC-Nr. 4 394 881

|     |       |     |     |       |     |             |     |           |
|-----|-------|-----|-----|-------|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 | 600 | 263,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------|-----|-----|-------|-----|-------------|-----|-----------|

AC-Nr. 4 394 883

|      |       |           |  |       |     |             |     |           |
|------|-------|-----------|--|-------|-----|-------------|-----|-----------|
| 1050 | 244,5 | 1060-1080 |  | 254,5 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------|-----------|--|-------|-----|-------------|-----|-----------|

AC-Nr. 4 394 885

|     |       |  |  |  |     |             |     |      |
|-----|-------|--|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 891

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 893

Checking values in brackets

|    |     |             |     |     |             |     |             |     |           |
|----|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| En | 900 | 259,0-267,0 | 925 | 700 | 238,0-246,0 | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
|----|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

\* 1 mm less control rod travel than col. 2

Testoil-ISO 4113

**C. Settings for Fuel Injection Pump with Fitted Governor**

|  |                  |              |  |                  |  |                  |                  |                       |
|--|------------------|--------------|--|------------------|--|------------------|------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp 40°C (104°F) ② |                  | Breakaway ②b | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                  | Starting fuel delivery<br>Idle switching point ⑥ |                  | Low idle speed ⑤ |                       |
| rev/min  | cm³/1000 strokes | rev/min ④a   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1  | 2                | 3            | 4  | 5                | 6  | 7                | 8                | 9                     |

|                  |             |           |     |             |     |             |     |           |
|------------------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 895 |             |           |     |             |     |             |     |           |
| 1000             | 188,0-196,0 | 1025      | 800 | 180,0-187,0 | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 897 |             |           |     |             |     |             |     |           |
| 850              | 189,0-197,0 | 875       | 750 | 185,0-193,0 | 100 | 130,0-170,0 | 325 | 30,0      |
| AC-Nr. 4 394 899 |             |           |     |             |     |             |     |           |
| 900              | 175,0       | 925       | 700 | 158,0       | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 905 |             |           |     |             |     |             |     |           |
| 1000             | 239,0-247,0 | 1025      | 700 | 229,0-235,0 | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 907 |             |           |     |             |     |             |     |           |
| 900              | 161,0       | 925       | 800 | 151,0       | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 909 |             |           |     |             |     |             |     |           |
| 1050             | 202,0-210,5 | 1060-1080 |     |             | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 911 |             |           |     |             |     |             |     |           |
| 1000             | 230,5-239,5 | 1010-1030 |     |             | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 915 |             |           |     |             |     |             |     |           |
| 1000             | 203,0-211,5 | 1010-1030 |     |             | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 917 |             |           |     |             |     |             |     |           |
| 1050             | 260,5-271,0 | 1060-1080 |     |             | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 919 |             |           |     |             |     |             |     |           |
| 1050             | 215,5-261,5 | 1060-1080 |     |             | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 921 |             |           |     |             |     |             |     |           |
| 1050             | 260,5-271,0 | 1060-1080 | 900 | 267,0-278,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                  |             |           | 700 | 267,0-278,0 |     |             |     |           |
| AC-Nr. 4 394 925 |             |           |     |             |     |             |     |           |
| 1050             | 244,0       | 1070      | 900 | 234,0       | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 997 |             |           |     |             |     |             |     |           |
| 900              | 173,0-179,0 | 920       | 800 | 160,0-166,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

**Testoil-ISO 4113**

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

BOSCH TEST SPECS. IP ASSEMBLY  
Pump: PE 8 P 120 A 920/4 LS 7149  
Regulator: RE 30

TEST SHEET: SCA 14.2 k  
Edition: 05. 12. 89 (2)  
Type number: 0 412 628 826  
Type number: 0 421 890 007  
CUSTOMER IDENT. NO.: -- --

IP ASSEMBLY 0 402 698 802

Customer-specific details

Customer: Scania  
Engine: DSC 1404  
Output kW: 347  
at 1/min: 1900

Min Max

Min Max  
PC mark Cyl. No. 1  
Pulse wheel  
position  
(PC cam) °CS 0 of CS CYL1  
Tolerance +/-°CS 0.2  
P Tolerance +/-°CS 0.5

TEST PREREQUISITES

Test oil inlet temperature °C 38 42  
Overflow valve 1 417 413 025  
Inlet pressure bar 1.5  
Overflow 1/h 100 120  
Calibrating nozzle-holder assembly 1 688 901 019  
Opening pressure bar 207 210  
Perforated plate diameter mm 0.8  
Test pressure line 1 680 750 015  
Dimensions:  
Outer diameter mm 6.00  
x wall thickness mm 1.50  
x length mm 600

Section B -  
Actuator test  
- Check values denoted by "P"  
- Assembly warm-up time: 3 mins. at  
n = 600 1/min, U/Norm = 2.5 V

CONTROL-ROD PICKUP SETTING

Test speed 1/min 0  
Setting value  
U/Norm V 3.10  
Control-rod travel mm 12.95 13.05  
P Control-rod travel mm 12.90 13.10  
Check value  
U/Norm V 1.70  
Control-rod travel mm 5.90 6.40  
P Control-rod travel mm 5.85 6.45

TEST SPECIFICATIONS

Section A -  
Setting values of injection pump  
- Check values denoted by "P"  
- No basic setting. Equal delivery  
setting under Section C

Stop position  
U/Norm V min.  
Control-rod travel mm 0.5 1.0  
P Control-rod travel mm 0.4 1.1

PORT CLOSING

PC setting cyl. 1  
Test pressure bar 25 27  
Prestroke (from BDC) mm 5.0 5.1  
Prestroke (from BDC) mm 4,95 5.15  
Control-rod travel mm 9.0 12.0  
Cam sequence 1 - 2 - 7 -  
3 - 4 - 5 -  
6 - 8  
PC difference °CS 45 each  
tolerance +/-°CS 0.50  
tolerance +/-°CS 0.75

SPEED SENSOR SIGNALS

- Test with control rod in stop position  
Speed 1/min 60  
pos.amplitude V 0.8 2.0  
P pos.amplitude V 0.6 3.0  
Speed 1/min 600  
Difference  
Amplitude to  
amplitude V max. 1.4

Continued on next page

-----  
Min Max  
-----

S e c t i o n   C -

Injection pump with actuator

- Check values denoted by "P"

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FUEL DELIVERY TEST AND SETTING

Test point V 1

|                 |             |       |       |
|-----------------|-------------|-------|-------|
| Speed           | 1/min       | 700   |       |
| U/Norm          | V           | 3.18  |       |
| Fuel delivery   | cm3/1000str | 226.0 | 228.0 |
| P Fuel delivery | cm3/1000str | 223.0 | 231.0 |
| Dispersion      | cm3/1000str | 6.0   |       |
| P Dispersion    | cm3/1000str | 9.0   |       |

Test point L1

|                 |             |      |      |
|-----------------|-------------|------|------|
| Speed           | 1/min       | 225  |      |
| U/Norm          | V           | 1.6  |      |
| Fuel delivery   | cm3/1000str | 16.0 | 20.0 |
| P Fuel delivery | cm3/1000str | 13.0 | 23.0 |
| Dispersion      | cm3/1000str | 3.0  |      |
| P Dispersion    | cm3/1000str | 6.0  |      |

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# BOSCH INJECTION PUMP TEST SPECIFICATIONS

Observe notes in remark column

Test sheet : PEU 2.5 F  
 Date of manufacture :  
 Edition : 10.12.1991  
 Replaces : 05.07.1989  
 Test oil : ISO 4113  
 Injection pump : VE4/9E2075 R 190  
 Type No. : 0 460 494 999  
 Customer Ident. No. :

## Customer-specific details

Customer : Peugeot

Engine : XD 3 T

Output KW : 77  
 Speed 1/min : 4150

## TEST BENCH PREREQUISITES

Test oil  
 return temp. > °C  
 with thermometer> : 40...48  
 electronic> : 42...50

Inlet pressure, bar : 0.30...0.40

Calibrating nozzle-  
 holder assembly> : 1 688 901 022

Opening  
 pressure> bar : 130...133

Test pressure line : 1 680 750 073

Outer diameter : 6.00  
 x wall thickness> : 2.00  
 x length> mm : 450

Overflow valve : 1 463 456 303

Test line : 1 684 463 218  
 (fuel-delivery actuator)

Test line : 1 684 463 221  
 (solenoid valve  
 start of injection)

# ELECTRICAL TEST

## Actuator

Connections 4 and 7

Test temperature:  
 15°...30°C, ohms : 0.4...1.0  
 50°...70°C, ohms : 0.45...1.1

Connection 4 and  
 ground, Mohms min.: 1.0

Connection 7 and  
 ground, Mohms min.: 1.0

Connection 2 and 7  
 Mohms min. : 1.0

Connection 4 and 6  
 Mohms min. : 1.0

## Control-collar travel sensor

Test temperature :  
 15°...70°C  
 Connections 2 and 3  
 kohms : 1.0...3.0  
 Connections 1 and 3  
 kohms : 0.5...2.0

Connection 1 and  
 ground, Mohms min.: 1.0

Connection 2 and  
 ground, Mohms min.: 1.0

Connection 3 and  
 ground, Mohms min.: 1.0

## Temperature sensor, fuel

Connections 5 and 6  
 Test temperature :  
 15°...30°C, kohms : 1.2...4.0  
 50°...70°C, kohms : 0.3...1.2

Connection 5 and  
 ground, Mohms min.: 1.0

Connection 6 and  
 ground, Mohms min.: 1.0

## Solenoid valve, start of injection

Connections 1 and 2  
 Test temperature :  
 15°...30°C, ohms : 14.3...17.3  
 50°...70°C, ohms : 15.5...21.0

Setting values of injection pump  
Check values in brackets

Supply pump pressure:

Speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Setting value, bar: 6.0...6.6  
Solenoid valve  
Start of  
injection, volts : 0

Timing device travel:

Speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Setting value, mm : 8.5...8.9  
Solenoid valve  
Start of  
injection, volts : 0

Full-load delivery:

Speed 1/min : 1500  
Checkbk. volt. mV : 2750  
Fuel delivery cm3/  
> 1000str: 37.2...38.2  
Solenoid valve  
Start of  
injection, volts : 0  
Dispersion cm3/  
> 1000str: 2.5

Test specifications of injection pump  
Check values in brackets

Supply pump pressure variations:

1st speed 1/min : 300  
Checkbk. volt. mV : 3000  
Supply pump  
pressure > bar : 4.8...5.4  
> bar : (4.6...5.6)  
Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Supply pump  
pressure > bar :  
> bar : (5.8...6.8)  
Solenoid valve  
Start of  
injection, volts : 0

Timing device variations:

1st speed 1/min : 100  
Checkbk. volt. mV : 4000  
Timing device  
travel mm : 1.9...4.7  
> mm : (1.6...5.0)  
Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 1000  
Checkbk. volt. mV : 2300  
Timing device  
travel mm : 0.0...0.6  
> mm : (0.0...0.6)  
Solenoid valve  
Start of  
injection, volts : 12  
3rd speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Timing device  
travel mm :  
> mm : (8.0...9.4)  
Solenoid valve  
Start of  
injection, volts : 0  
4th speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Timing device  
travel mm : 12.0...12.6  
> mm : (11.8...12.8)  
Solenoid valve  
Start of  
injection, volts : 0

Overflow at overflow valve

1st speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 84...168  
> cm3/10: (84...168)



Fuel delivery variations:

1st speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 50.5...52.5  
> 1000str: (49.0...54.0)  
Dispersion cm3/: 2.5  
> 1000str: (2.5)  
2nd speed 1/min : 1500  
Checkbk. volt. mV : 2750  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/:  
> 1000str: (35.7...39.7)  
Dispersion cm3/:  
> 1000str: (2.5)  
3rd speed 1/min : 1500  
Checkbk. volt. mV : 2000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 8.9...10.9  
> 1000str: (7.4...12.4)  
4th speed 1/min : 500  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 36.2...38.2  
> 1000str: (34.7...42.7)

Idle delivery:

Speed 1/min : 375  
Checkbk. volt. mV : 2500  
Fuel delivery cm3/:  
> 1000str: (6.1...14.1)  
Solenoid valve  
Start of  
injection, volts : 12  
Dispersion cm3/:  
> 1000str: (2.5)

Starting fuel delivery:

Speed 1/min : 100  
Checkbk. volt. mV : 4000  
Fuel delivery min.:  
> cm3/1000str: 45.0  
Solenoid valve  
Start of  
injection, volts : 12

Stop test:

Speed 1/min : 2075  
Checkbk. volt. mV : 3000  
ELAB, volts : 0  
Fuel delivery cm3/:  
max. 1000str: 4.0

Shutoff solenoid:

Cut-in voltage  
min.> volts : 10.0  
Rated voltage,  
volts: 12.0

## BOSCH INJECTION PUMP TEST SPECIFICATIONS

Observe notes in remark column

Test sheet : CIT 2.5 A  
Date of manufacture :  
Edition : 10.12.1991  
Replaces : 05.07.1989  
Test oil : ISO 4113  
  
Injection pump : VE4/9E2075 R 220  
  
Type No. : 0 460 494 998  
Customer Ident. No. :

Customer-specific details  
Customer : Citroen

Engine : M 25-671

Output KW : 78  
Speed 1/min : 4150

### TEST BENCH PREREQUISITES

Test oil  
return temp. > °C  
with thermometer> : 40...48  
electronic> : 42...50

Inlet pressure, bar : 0.30...0.40

Calibrating nozzle-  
holder assembly> : 1 688 901 022

Opening  
pressure> bar : 130...133

Test pressure line : 1 680 750 073

Outer diameter : 6.00  
x wall thickness> : 2.00  
x length> mm : 450

Overflow valve : 1 463 456 303

Test line : 1 684 463 218  
(fuel-delivery actuator)

Test line : 1 684 463 221  
(solenoid valve  
start of injection)

Port closing  
Prestroke mm : 0.5  
> (from BDC): +/-0.02

## ELECTRICAL TEST

Actuator  
Connections 4 and 7  
Test temperature:  
15°...30°C, ohms : 0.4...1.0  
50°...70°C, ohms : 0.45...1.1

Connection 4 and  
ground, Mohms min.: 1.0  
Connection 7 and  
ground, Mohms min.: 1.0  
Connection 2 and 7  
Mohms min. : 1.0  
Connection 4 and 6  
Mohms min. : 1.0

Control-collar travel sensor  
Test temperature :  
15°...70°C  
Connections 2 and 3  
kohms : 1.0...3.0  
Connections 1 and 3  
kohms : 0.5...2.0

Connection 1 and  
ground, Mohms min.: 1.0  
Connection 2 and  
ground, Mohms min.: 1.0  
Connection 3 and  
ground, Mohms min.: 1.0

Temperature sensor, fuel  
Connections 5 and 6  
Test temperature :  
15°...30°C, kohms : 1.2...4.0  
50°...70°C, kohms : 0.3...1.2

Connection 5 and  
ground, Mohms min.: 1.0  
Connection 6 and  
ground, Mohms min.: 1.0

Solenoid valve, start of  
injection  
Connections 1 and 2  
Test temperature :  
15°...30°C, ohms : 14.3...17.3  
50°...70°C, ohms : 15.5...21.0

Setting values of injection pump  
Check values in brackets

Supply pump pressure:

Speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Setting value, bar: 6.0...6.6  
Solenoid valve  
Start of  
injection, volts : 0

Timing device travel:

Speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Setting value, mm : 8.6...9.0  
Solenoid valve  
Start of  
injection, volts : 0

Full-load delivery:

Speed 1/min : 1500  
Checkbk. volt. mV : 2750  
Fuel delivery cm3/  
> 1000str: 37.3...38.3  
Solenoid valve  
Start of  
injection, volts : 0  
Dispersion cm3/: 2.5  
> 1000str:

Test specifications of injection pump  
Check values in brackets

Supply pump pressure variations:

1st speed 1/min : 300  
Checkbk. volt. mV : 3000  
Supply pump  
pressure > bar : 4.8...5.4  
> bar : (4.6...5.6)  
Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Supply pump  
pressure > bar :  
> bar : (5.8...6.8)  
Solenoid valve  
Start of  
injection, volts : 0

Timing device variations:

1st speed 1/min : 100  
Checkbk. volt. mV : 4000  
Timing device  
travel mm : 2.2...5.0  
> mm : (1.9...5.3)  
Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 1000  
Checkbk. volt. mV : 2300  
Timing device  
travel mm : 0.0...0.6  
> mm : (0.0...0.6)  
Solenoid valve  
Start of  
injection, volts : 12  
3rd speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Timing device  
travel mm :  
> mm : (8.1...9.5)  
Solenoid valve  
Start of  
injection, volts : 0  
4th speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Timing device  
travel mm : 12.0...12.6  
> mm : (11.8...12.8)  
Solenoid valve  
Start of  
injection, volts : 0

Overflow at overflow valve

1st speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 84...168  
> cm3/10: (84...168)

#### Fuel delivery variations:

1st speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 50.8...52.8  
> 1000str: (49.3...54.3)  
Dispersion cm3/: 2.5  
> 1000str: (2.5)  
2nd speed 1/min : 1500  
Checkbk. volt. mV : 2750  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/:  
> 1000str: (37.0...38.6)  
Dispersion cm3/:  
> 1000str: (2.5)  
3rd speed 1/min : 1500  
Checkbk. volt. mV : 2000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 10.5...12.5  
> 1000str: (10.0...13.0)  
4th speed 1/min : 500  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 38.0...40.0  
> 1000str: (37.5...40.5)

#### Idle delivery:

Speed 1/min : 375  
Checkbk. volt. mV : 2400  
Fuel delivery cm3/:  
> 1000str: (7.4...15.4)  
Solenoid valve  
Start of  
injection, volts : 12  
Dispersion cm3/:  
> 1000str: (2.5)

#### Starting fuel delivery:

Speed 1/min : 100  
Checkbk. volt. mV : 4000  
Fuel delivery min.:  
> cm3/1000str: 45.0  
Solenoid valve  
Start of  
injection, volts : 12

#### Stop test:

Speed 1/min : 2075  
Checkbk. volt. mV : 3000  
ELAB, volts : 0  
Fuel delivery cm3/:  
max. 1000str: 5.0

#### Shutoff solenoid:

Cut-in voltage  
min.> volts : 10.0  
Rated voltage,  
volts: 12.0

#### Dimensions for mounting and setting:

##### Description

|          |    |             |
|----------|----|-------------|
| K        | mm | :           |
| KF       | mm | : 5.4...5.7 |
| SVS max. | mm | :           |
| FH       | mm | :           |

## BOSCH INJECTION PUMP TEST SPECIFICATIONS

Observe notes in remark column

Test sheet : BMW 2.4 G  
Date of manufacture :  
Edition : 10.12.1991  
Replaces : 05.07.1989  
Test oil : ISO 4113

Injection pump : VE6/10E2400 R 260

Type No. : 0 460 406 998  
Customer Ident. No. :

Customer-specific details  
Customer : BMW

Engine : M 21 D 24 WA

Output KW : 85  
Speed 1/min : 4800

### TEST BENCH PREREQUISITES

Test oil  
return temp. > °C  
with thermometer> : 40...48  
electronic> : 42...50

Inlet pressure, bar : 0.30...0.40

Calibrating nozzle-  
holder assembly> : 1 688 901 022

Opening  
pressure> bar : 130...133

Test pressure line : 1 680 750 073

Outer diameter : 6.00  
x wall thickness> : 2.00  
x length> mm : 450

Overflow valve : 1 463 456 303

Test line : 1 684 463 219  
(fuel-delivery actuator)

Test line : 1 684 463 220  
(solenoid valve  
start of injection)

Port closing  
Prestroke mm : 0.5  
> (from BDC): +-0.02

## ELECTRICAL TEST

Actuator  
Connections 4 and 7  
Test temperature:  
15°...30°C, ohms : 0.4...1.0  
50°...70°C, ohms : 0.45...1.1

Connection 4 and  
ground, Mohms min.: 1.0  
Connection 7 and  
ground, Mohms min.: 1.0  
Connection 2 and 7  
Mohms min. : 1.0  
Connection 4 and 6  
Mohms min. : 1.0

Control-collar travel sensor  
Test temperature :  
15°...70°C  
Connections 2 and 3  
kohms : 1.0...3.0  
Connections 1 and 3  
kohms : 0.5...2.0

Connection 1 and  
ground, Mohms min.: 1.0  
Connection 2 and  
ground, Mohms min.: 1.0  
Connection 3 and  
ground, Mohms min.: 1.0

Temperature sensor, fuel  
Connections 5 and 6  
Test temperature :  
15°...30°C, kohms : 1.2...4.0  
50°...70°C, kohms : 0.3...1.2

Connection 5 and  
ground, Mohms min.: 1.0  
Connection 6 and  
ground, Mohms min.: 1.0

Solenoid valve, start of  
injection  
Connections 1 and 2  
Test temperature :  
15°...30°C, ohms : 14.3...17.3  
50°...70°C, ohms : 15.5...21.0

Starting stop mV :  
max. mV : 4120...4650

Shutoff stop mV : 650...850

Setting values of injection pump  
Check values in brackets

Supply pump pressure:

Speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Setting value, bar: 6.4...7.0  
Solenoid valve  
Start of  
injection, volts : 0

Timing device travel:

Speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Setting value, mm : 7.0...7.4  
Solenoid valve  
Start of  
injection, volts : 0

Full-load delivery:

Speed 1/min : 1500  
Checkbk. volt. mV : 2600  
Fuel delivery cm3/  
> 1000str: 24.0...25.0  
Solenoid valve  
Start of  
injection, volts : 0  
Dispersion cm3/  
> 1000str:

Test specifications of injection pump  
Check values in brackets

Supply pump pressure variations:

1st speed 1/min : 400  
Checkbk. volt. mV : 3680  
Supply pump  
pressure > bar : 4.9...5.5  
> bar : (4.7...5.7)

Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Supply pump  
pressure > bar :  
> bar : (6.2...7.2)

Solenoid valve  
Start of  
injection, volts : 0  
3rd speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Supply pump  
pressure > bar : 8.0...8.8  
> bar : (7.9...8.9)

Solenoid valve  
Start of  
injection, volts : 0

Timing device variations:

1st speed 1/min : 150  
Checkbk. volt. mV : 3680  
Timing device  
travel mm : 1.6...4.4  
> mm : (1.3...4.7)

Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 400  
Checkbk. volt. mV : 3680  
Timing device  
travel mm : 4.5...5.9  
> mm : (4.2...6.2)

Solenoid valve  
Start of  
injection, volts : 0  
3rd speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Timing device  
travel mm :  
> mm : (6.5...7.9)

Solenoid valve  
Start of  
injection, volts : 0  
4th speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Timing device  
travel mm : 0.0...0.2  
> mm : (0.0...0.2)

Solenoid valve  
Start of  
injection, volts : 12  
5th speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Timing device  
travel mm : 8.7...9.3  
> mm : (8.5...9.5)

Solenoid valve  
Start of  
injection, volts : 0

Overflow at overflow valve

1st speed 1/min : 500  
Checkbk. volt. mV : 3100  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 55...70  
> cm3/10: (50...75)  
2nd speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 82...112  
> cm3/10: (77...117)

#### Fuel delivery variations:

1st speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 39.6...41.6  
> 1000str: (38.1...43.1)  
Dispersion cm3/: 2.5  
> 1000str: (2.5)  
2nd speed 1/min : 1500  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 37.6...39.6  
> 1000str: (36.3...41.3)  
Dispersion cm3/: 2.0  
> 1000str: (2.0)  
3rd speed 1/min : 1500  
Checkbk. volt. mV : 2600  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/:  
> 1000str: (22.5...26.5)  
Dispersion cm3/: 2.0  
> 1000str: (2.0)  
4th speed 1/min : 1000  
Checkbk. volt. mV : 3140  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 36.3...38.3  
> 1000str: (34.8...39.8)  
Dispersion cm3/: 2.0  
> 1000str: (2.0)  
5th speed 1/min : 1000  
Checkbk. volt. mV : 2400  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 9.9...11.9  
> 1000str: (8.6...13.2)  
Dispersion cm3/: 2.0  
> 1000str: (2.0)  
6th speed 1/min : 500  
Checkbk. volt. mV : 3100  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 23.5...25.5  
> 1000str: (22.0...27.0)  
Dispersion cm3/: 2.0  
> 1000str: (2.0)

#### Idle delivery:

Speed 1/min : 400  
Checkbk. volt. mV : 2770  
Fuel delivery cm3/:  
> 1000str: (7.5...12.5)  
Solenoid valve  
Start of  
injection, volts : 12  
Dispersion cm3/:  
> 1000str: (2.0)

#### Starting fuel delivery:

Speed 1/min : 100  
Checkbk. volt. mV : 3680  
Fuel delivery min.:  
> cm3/1000str: 24.0  
Solenoid valve  
Start of  
injection, volts : 12

#### Stop test:

Speed 1/min : 2400  
Checkbk. volt. mV : 2970  
ELAB, volts : 0  
Fuel delivery cm3/:  
max. 1000str: 5.0

#### Shutoff solenoid:

Cut-in voltage  
min.> volts : 10.0  
Rated voltage,  
volts: 12.0

#### Dimensions for mounting and setting:

##### Description

|          |    |             |
|----------|----|-------------|
| K        | mm | :           |
| KF       | mm | : 5.9...6.2 |
| SVS max. | mm | :           |
| FH       | mm | :           |

# BOSCH INJECTION PUMP TEST SPECIFICATIONS

Observe notes in remark column

Test sheet : BMW 2.4 G 1  
Date of manufacture :  
Edition : 10.12.1991  
Replaces : 05.07.1989  
Test oil : ISO 4113

Injection pump : VE6/10E2400 R 260-1

Type No. : 0 460 406 997  
Customer Ident. No. :

Customer-specific details  
Customer : BMW

Engine : M 21 D 24 WA

Output KW : 85  
Speed 1/min : 4800

## TEST BENCH PREREQUISITES

Test oil  
return temp. > °C  
with thermometer> : 40...48  
electronic> : 42...50

Inlet pressure, bar : 0.30...0.40

Calibrating nozzle-  
holder assembly> : 1 688 901 022

Opening  
pressure> bar : 130...133

Test pressure line : 1 680 750 073

Outer diameter : 6.00  
x wall thickness> : 2.00  
x length> mm : 450

Overflow valve : 1 463 456 303

Test line : 1 684 463 217  
(fuel-delivery actuator)

Test line : 1 684 463 221  
(solenoid valve  
start of injection)

Port closing  
Prestroke mm : 0.5  
> (from BDC): +/-0.02

# ELECTRICAL TEST

Actuator  
Connections 4 and 7  
Test temperature:  
15°...30°C, ohms : 0.4...1.0  
50°...70°C, ohms : 0.45...1.1

Connection 4 and  
ground, Mohms min.: 1.0  
Connection 7 and  
ground, Mohms min.: 1.0  
Connection 2 and 7  
Mohms min. : 1.0  
Connection 4 and 6  
Mohms min. : 1.0

Control-collar travel sensor  
Test temperature :  
15°...70°C  
Connections 2 and 3  
kohms : 1.0...3.0  
Connections 1 and 3  
kohms : 0.5...2.0

Connection 1 and  
ground, Mohms min.: 1.0  
Connection 2 and  
ground, Mohms min.: 1.0  
Connection 3 and  
ground, Mohms min.: 1.0

Temperature sensor, fuel  
Connections 5 and 6  
Test temperature :  
15°...30°C, kohms : 1.2...4.0  
50°...70°C, kohms : 0.3...1.2

Connection 5 and  
ground, Mohms min.: 1.0  
Connection 6 and  
ground, Mohms min.: 1.0

Solenoid valve, start of  
injection  
Connections 1 and 2  
Test temperature :  
15°...30°C, ohms : 14.3...17.3  
50°...70°C, ohms : 15.5...21.0

Starting stop mV : 4120...4650

Shutoff stop mV : 650...850



Setting values of injection pump  
Check values in brackets

Supply pump pressure:

Speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Setting value, bar: 6.4...7.0  
Solenoid valve  
Start of  
injection, volts : 0

Timing device travel:

Speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Setting value, mm : 7.0...7.4  
Solenoid valve  
Start of  
injection, volts : 0

Full-load delivery:

Speed 1/min : 1500  
Checkbk. volt. mV : 2600  
Fuel delivery cm3/  
> 1000str: 25,6...26,0  
Solenoid valve  
Start of  
injection, volts : 0  
Dispersion cm3/: 2.0  
> 1000str:

Test specifications of injection pump  
Check values in brackets

Supply pump pressure variations:

1st speed 1/min : 400  
Checkbk. volt. mV : 3680  
Supply pump  
pressure > bar : 4.9...5.5  
> bar : (4.7...5.7)

Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Supply pump  
pressure > bar :  
> bar : (6.2...7.2)

Solenoid valve  
Start of  
injection, volts : 0  
3rd speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Supply pump  
pressure > bar : 8.0...8.8  
> bar : (7.9...8.9)

Solenoid valve  
Start of  
injection, volts : 0

Timing device variations:

1st speed 1/min : 150  
Checkbk. volt. mV : 3680  
Timing device  
travel mm :  
> mm : (1.3...4.7)

Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 400  
Checkbk. volt. mV : 3680  
Timing device  
travel mm : 4.5...5.9  
> mm : (4.2...6.2)

Solenoid valve  
Start of  
injection, volts : 0  
3rd speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Timing device  
travel mm :  
> mm : (6.5...7.9)

Solenoid valve  
Start of  
injection, volts : 0  
4th speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Timing device  
travel mm : 0.0...0.2  
> mm : (0.0...0.2)

Solenoid valve  
Start of  
injection, volts : 12  
5th speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Timing device  
travel mm : 8.7...9.3  
> mm : (8.5...9.5)

Solenoid valve  
Start of  
injection, volts : 0

Overflow at overflow valve

1st speed 1/min : 500  
Checkbk. volt. mV : 3100  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 55...70  
> cm3/10: (50...75)  
2nd speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 82...112  
> cm3/10: (77...117)

# Fuel delivery variations:

1st speed 1/min : 2400  
Checkbk. volt. mV :  
Solenoid valve 2970  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 40.8...42.8  
> 1000str: (39.3...44.3)  
Dispersion cm3/: 2,5  
> 1000str: (2,5)  
2nd speed 1/min : 1500  
Checkbk. volt. mV :  
Solenoid valve 3000  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 38,2...40,2  
> 1000str: (36.9...41,5)  
Dispersion cm3/: 2,0  
> 1000str: (2,0)  
3rd speed 1/min : 1500  
Checkbk. volt. mV :  
Solenoid valve 2600  
Start of  
injection, volts : 0  
Fuel delivery cm3/:  
> 1000str: (23,8...27,8)  
Dispersion cm3/:  
> 1000str: (2,0)  
4th speed 1/min : 1000  
Checkbk. volt. mV :  
Solenoid valve 3140  
Start of  
injection, volts : 0  
Fuel delivery cm3/:  
> 1000str: (37,8...42,8)  
Dispersion cm3/: 2,0  
> 1000str: (2,0)  
5th speed 1/min : 1000  
Checkbk. volt. mV :  
Solenoid valve 2400  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 11,0...12.6  
> 1000str: (9,5...14,1)  
Dispersion cm3/: 2,0  
> 1000str: (2,0)  
6th speed 1/min : 625  
Checkbk. volt. mV :  
Solenoid valve 3000  
Start of  
injection, volts : 0  
Fuel delivery cm3/:  
> 1000str: (25.2...29.2)  
7th speed 1/min : 500  
Checkbk. volt. mV :  
Solenoid valve 3100  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 26,9...28,9  
> 1000str: (25,4...30,4)  
Dispersion cm3/: 2,0  
> 1000str: (2,0)

# Idle delivery:

Speed 1/min : 400  
Checkbk. volt. mV : 2770  
Fuel delivery cm3/:  
> 1000str: (7,7...12.7)  
Solenoid valve  
Start of  
injection, volts : 12  
Dispersion cm3/:  
> 1000str: (2.0)

# Starting fuel delivery:

Speed 1/min : 100  
Checkbk. volt. mV : 3680  
Fuel delivery min.:  
> cm3/1000str: 26.0  
Solenoid valve  
Start of  
injection, volts : 12

# Stop test:

Speed 1/min : 2400  
Checkbk. volt. mV : 2970  
ELAB, volts : 0  
Fuel delivery cm3/:  
max. 1000str: 3.0

# Shutoff solenoid:

Cut-in voltage  
min.> volts : 10.0  
Rated voltage,  
volts: 12.0

# Dimensions for mounting and setting:

## Description

|          |    |             |
|----------|----|-------------|
| K        | mm | :           |
| KF       | mm | : 5.9...6.2 |
| SVS max. | mm | :           |
| FH       | mm | :           |

①

# Test Specifications Fuel Injection Pumps ① and Governors

40

WPP 001/4 MAC 11,0 k

1. Edition

En

PES 6 P 110 A 720 RS3024 RQV 300/600-1050 PA342KR

supersedes -

PA344KR

company

PES 6 P 110 A720/3RS3036 RQV 300/600-1050 PA365KR

engine

Mack

PA366KR

ETA 676 B  
(306 PS)

PLE-Maß = 0,740"-0,820"

\*\* Values only apply to test nozzle-  
and-holder assembly 0 681 343 009  
and fuel-injection test tubing 1 680 750 015

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke (2,35-2,55) mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod<br>travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /<br>100 strokes<br>4 | Control rod<br>travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|----------------------------------|--|---|----------------------------------|--|--|
| 1000                             | 14,3+0,1                         | 22,1-22,3  | 0,4   |                                  |  |  |
| 300                              | 5,0-5,2                          | 1,2-2,3  | 0,4   |                                  |  |  |

Adjust the fuel delivery from each outlet according to the values in 

Testoil-ISO 4113

## B. Governor Settings

| Upper rated speed                                   |   |   | Intermediate rated speed                            |              |                                  | Lower rated speed                                   |  |   | Sliding sleeve travel     |  |
|---|---|---|---|--------------|----------------------------------|---|--|---|---------------------------|--|
| Degree of<br>deflection<br>of control<br>lever<br>1 | rev/min<br>Control rod<br>travel<br>mm<br>2 | Control rod<br>travel<br>mm<br>rev/min<br>3 | Degree of<br>deflection<br>of control<br>lever<br>4 | rev/min<br>5 | Control rod<br>travel<br>mm<br>6 | Degree of<br>deflection<br>of control<br>lever<br>7 | rev/min<br>8                           | Control rod<br>travel<br>mm<br>9                              | rev/min<br>10             | mm<br>11                                       |
| ca.68   | 1070<br>1150<br>1200<br>1280                | 15,5-18,0<br>6,0-11,0<br>0 - 6,8<br>0       | -   | -            | -                                | ca.19   | 250<br>300<br>400<br>580<br>700<br>830 | 9,8-11,3<br>7,5- 8,5<br>2,5- 5,0<br>2,5- 5,0<br>0,8- 2,0<br>0 | 300<br>400<br>900<br>1070 | 0,6-1,8<br>-600 =<br>3,1-3,6<br>5,8-6,2<br>8,2 |

Torque control travel a =  mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                                    | Rotational-speed<br>limitation<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |  | Starting fuel delivery<br>idle<br>switching point ⑥ |  | Torque-control ⑤<br>travel<br>Control rod<br>travel<br>mm |                                      |
|---|------------------------------------|---|--|--|---|--|---|--------------------------------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3  | rev/min<br>4   | cm <sup>3</sup> /1000 strokes<br>5   | rev/min<br>6  | cm <sup>3</sup> /1000 strokes<br>7             | rev/min<br>8  | mm<br>9                              |
| LDA<br>1000   | 1,7 bar<br>221,0-223,0             | 1090-1100*  | LDA<br>800<br>500<br>LDA<br>600<br>300                 | 1,7 bar<br>223,5-226,5<br>235,5-238,5<br>0 bar<br>143,0-146,0<br>114 -122<br>(PLE) | 100<br>300  | ca.11,5mmRW<br>ca. 5 mmRW<br>dispersion max. 4 | 1050<br>900<br>700<br>600<br>500                          | 14,4<br>14,4<br>14,7<br>15,2<br>14,9 |

Checking values in brackets

\* 1 mm less control rod travel than col 2

3.83

BOSCH

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D21

# Test Specifications Fuel Injection Pumps ① and Governors

En

PE 6 P 120 A 320 RS 3032 Z RQV 250-1100 PA 355/2R  
Testing with T nozzles and fuel lines 8x2x1000 according

supersedes 7.79  
company: Volvo  
engine: TD 120 C

\*\* In the case of greater dispersion alter the delivery-valve spring pre-tension accordingly.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

| Port closing at prestroke |                    | 2,60-2,70<br>(2,55-2,75)     | mm (from BDC)                |                    | Cyl. 6                       |  |
|---------------------------|--------------------|------------------------------|------------------------------|--------------------|------------------------------|--|
| Rotational speed          | Control rod travel | Fuel delivery                | Difference                   | Control rod travel | Fuel delivery                | Spring pre-tensioning (torque-control valve) |
| rev/min                   | mm                 | cm <sup>3</sup> /100 strokes | cm <sup>3</sup> /100 strokes | mm                 | cm <sup>3</sup> /100 strokes | mm   |
| 1                         | 2                  | 3                            | 4                            | 2                  | 3                            | 6  |
| 700                       | 13,0-13,1          | 24,5-24,9                    | 0,5(0,9)                     |                    |                              | 25±0,1 **<br>(max. 2,2-2,9)                  |
| 250                       | 5,2-5,5            | 0,9-1,3                      | 0,5(0,8)                     |                    |                              |  |
| 700                       | -                  | C, 4-5                       | 0,7(1,1)                     |                    |                              |  |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

| Upper rated speed                     |              |                        | Intermediate rated speed              |         |                    | Lower rated speed                     |               |                      | Sliding sleeve travel |                    |
|---------------------------------------|--------------|------------------------|---------------------------------------|---------|--------------------|---------------------------------------|---------------|----------------------|-----------------------|--------------------|
| Degree of deflection of control lever | rev/min      | Control rod travel     | Degree of deflection of control lever | rev/min | Control rod travel | Degree of deflection of control lever | rev/min       | Control rod travel   | rev/min               | mm                 |
| 1                                     | 2            | 3                      | 4                                     | 5       | 6                  | 7                                     | 8             | 9                    | 10                    | 11                 |
| ca. 50                                | 1100<br>1350 | 15,2-17,8<br>0 - 1,0   |                                       |         |                    | ca. 12                                | 100<br>250    | mind. 7,0<br>5,3-5,5 | 350<br>650            | 1,4-2,0<br>3,7-4,0 |
| ca. 47                                | 12,0<br>4,0  | 1140-1150<br>1235-1265 |                                       |         |                    |                                       | 310-370 = 2,0 |                      | 1170                  | 8,3                |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control rod stop<br>Test oil temp. 40°C (104°F) |   | Rotational speed<br>limitation<br>intermediate speed | Fuel delivery characteristics |                                       | Starting fuel delivery |                                   | Torque-control |                    |
|---|---|--|-------------------------------|---------------------------------------|------------------------|-----------------------------------|----------------|--------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes           | rev/min  | rev/min                       | cm <sup>3</sup> /1000 strokes         | rev/min                | cm <sup>3</sup> /1000 strokes     | rev/min        | Control rod travel |
| 1   | 2                                       | 3  | 4                             | 5                                     | 6                      | 7                                 | 8              | 9                  |
| LDA<br>700  | 0,9 bar<br>245,0-249,0<br>(242,0-252,0) | 1140 - 1150*   | LDA<br>700                    | 0 bar<br>148,0-152,0<br>(145,0-155,0) | 100                    | 110,0-160,0<br>110,0-160,0        |                |                    |
|   |   |  |                               |                                       | 250                    | 9,0-13,0**<br>dispersion max.5(8) |                |                    |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

# D. Adjustment Test for Manifold Pressure Compensator

VOL 12,0 c 1 -2-

Test at n = 500 rev/min decreasing pressure - in bar gauge pressure

| Pump/governor      | Setting              | Measurement          | Control rod travel - diminution difference |
|--------------------|----------------------|----------------------|--|
|                    | Gauge pressure = bar | Gauge pressure = bar | mm (1)                                     |
| 3032 Z with 355/2R | 0,66                 | 0,14                 | 12,1 - 12,2                                |
|                    |                      |                      | 9,3 - 9,7                                  |

Notes:

(1) when n =

rev/min and  
gauge pressure =

bar (= maximum full-load control rod travel)

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4

3. Edition

En

PES 6 MW 100/320 RS 1016 RQV 300-1400 MW 25  
Komb.-Nr. 0 403 446 117  
1-5-3-6-2-4 = 0-60-120-180-240-300  $\pm 0,50^\circ$  (0,75)

supersedes 2.81  
company: RVI  
engine: MIDR 06.02-12  
125 kW  
(170 PS)

Port closing mark  $10,5^\circ$  after port closing cylinder 1

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 3,00-3,10 mm (from BDC) RW 9,0-12,0 mm  
(2,95-3,15)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1400                             | 11,1 $\pm$ 0,1                | 9,0 - 9,2  | 0,35(0,6)                                       |                               |  |  |
| 300<br>900<br>500                | 6,3-6,5                       | 0,95 - 1,35  | 0,35(0,55)<br>0,5 (0,7)<br>0,35(0,6)            |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

| Upper rated speed                          |  |  | Intermediate rated speed                   |              |                               | Lower rated speed                          |                       |                               | Sliding sleeve travel |          |
|--|--|--|--|--------------|-------------------------------|--|-----------------------|-------------------------------|-----------------------|----------|
| Degree of deflection of control lever<br>1 | rev/min<br>Control rod travel<br>mm<br>2 | Control rod travel<br>mm<br>rev/min<br>3 | Degree of deflection of control lever<br>4 | rev/min<br>5 | Control rod travel<br>mm<br>6 | Degree of deflection of control lever<br>7 | rev/min<br>8          | Control rod travel<br>mm<br>9 | rev/min<br>10         | mm<br>11 |
| ca. 68                                     | 1400<br>1700                             | 15,2-17,8<br>0 - 1,0                     |  |              |                               | ca. 13                                     | 100<br>300<br>490-550 | min. 8,0<br>6,3-6,5<br>=2,0   |                       |          |
| ca. 64                                     | 10,1<br>4,0                              | 1440-1450<br>1540-1570                   |  |              |                               | 3a   |                       |                               |                       |          |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                                      | Rotational-speed limitation<br>intermediate speed ②b | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                                      | Starting fuel delivery<br>idle switching point ⑥ |                        | Torque-control travel ⑤ |                               |
|---|--------------------------------------|--|--|--------------------------------------|--|------------------------|-------------------------|-------------------------------|
| rev/min<br>1  | cm³/1000 strokes<br>2                | rev/min ④a   | rev/min<br>4   | cm³/1000 strokes<br>5                | rev/min<br>6                                     | cm³/1000 strokes<br>7  | rev/min<br>8            | Control rod travel<br>mm<br>9 |
| LDA<br>1400   | 0,67 bar<br>90,0-92,0<br>(88,0-94,0) | 1440-1450*   | LDA<br>900   | 0,67 bar<br>86,5-90,5<br>(84,5-92,5) | 100  | min. 100,0             |                         |                               |
|   |                                      |  | LDA<br>500   | 0 bar<br>61,0-63,0<br>(58,0-66,0)    | 300  | 9,5-13,5<br>(7,0-16,0) |                         |                               |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 MAC 11,0 x 6

En

1. Edition

US-PES 6 P 110 A 720 RS 5006 US-RQV 300/600-1050 PA621-7K  
 Komb.-Nr. 9 400 231 171 PLE-Maß = 0,740" - 0,820"  
 Note VDT-I-MAC 002!  
 Values only apply to test nozzle-and-holder assembly 0 681 343 009  
 and fuel-injection test tubing 1 680 750 015

supersedes

company:

engine:

-

MACK

EME 6 - 250

250 PS

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke  $\begin{matrix} 3,2-3,3 \\ (3,15-3,35) \end{matrix}$  mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1050                             | 11,7±0,1                      | 17,7-17,9  | 0,4   |                               |  |  |
| 300                              | 5,2-5,4                       | 2,4 - 3,0  | 0,4   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

| Upper rated speed                          |                     |                                   |    | Intermediate rated speed                   |              |                            |   | Lower rated speed                          |                       |                            |   | Sliding sleeve travel |          |
|--|---------------------|-----------------------------------|----|--|--------------|----------------------------|---|--|-----------------------|----------------------------|---|-----------------------|----------|
| Degree of deflection of control lever<br>1 | rev/min<br>2        | Control rod travel mm<br>3        | ①a | Degree of deflection of control lever<br>4 | rev/min<br>5 | Control rod travel mm<br>6 | ④ | Degree of deflection of control lever<br>7 | rev/min<br>8          | Control rod travel mm<br>9 | ③ | rev/min<br>10         | mm<br>11 |
| max.                                       | 1120                | 15,2-17,8                         |    | -  | -            | -                          |   | ca. 20                                     | 250                   | 9,8-11,3                   |   | -                     | -        |
| ca. 61                                     | 10,7<br>4,0<br>1230 | 1090-1100<br>1165-1195<br>0 - 1,0 |    |  |              |                            |   | ③a   | 300<br>400<br>690-750 | 7,9-8,1<br>3,8-5,2<br>=2,0 |   |                       |          |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                                    | Rotational speed ②b<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                                    | Starting fuel delivery<br>idle switching point ⑥ |                                    | Torque-control ⑤ |                            |
|---|------------------------------------|--|--|------------------------------------|--|------------------------------------|------------------|----------------------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3                                 | rev/min<br>4   | cm <sup>3</sup> /1000 strokes<br>5 | rev/min<br>6                                     | cm <sup>3</sup> /1000 strokes<br>7 | rev/min<br>8     | Control rod travel mm<br>9 |
| 1050  | 176,5-178,5                        | 1090-1100*                                   | 850  | 184,0-188,0                        | 100  | 120,0-180,0                        | 1050             | 11,7                       |
|   |                                    |  | 630  | 202,0-206,0                        |  |                                    | 1000             | 11,6±0,1                   |
|   |                                    |  | 800  | 121,0-129,0                        |  |                                    | 850              | 11,9±0,1                   |
|   |                                    |  |  | PLE                                |  |                                    | 750              | 12,2±0,1                   |
|   |                                    |  |  |                                    |  |                                    | 630              | 12,8±0,1                   |
|   |                                    |  |  |                                    |  |                                    | 500              | 12,1±0,1                   |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

**BOSCH**

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# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 SCA 11,0 r 2

2. Edition

En

PE 6 P 110 A 720 RS 3040 RQV 250-1050 PA 379

supersedes 11.79

company: Scania

engine: DS 11

\*\* In the case of greater dispersion alter the delivery-valve spring pre-tension accordingly.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Cyl. 6

Port closing at prestroke

3,30-3,40

(3,25-3,45)

mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning (torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|---|
| 1050                             | 13,4-13,5                     | 16,6 - 16,8  | 0,4(0,8)  |                               |  | 3,3 ± **<br>(max. 3,0-3,5)                              |
| 225                              | 3,7-3,9                       | 0 1,1  | 0,2(0,4)  |                               |  |   |
| 600/500                          | -                             | C, 4-5   | 0,6(1,0)  |                               |  |   |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

| Upper rated speed                          |  |  | Intermediate rated speed                   |              |                               | Lower rated speed                          |                           |                               | Sliding sleeve travel |                       |
|--|--|--|--|--------------|-------------------------------|--|---------------------------|-------------------------------|-----------------------|-----------------------|
| Degree of deflection of control lever<br>1 | rev/min<br>Control rod travel<br>mm<br>2 | Control rod travel<br>mm<br>rev/min<br>3 | Degree of deflection of control lever<br>4 | rev/min<br>5 | Control rod travel<br>mm<br>6 | Degree of deflection of control lever<br>7 | rev/min<br>8              | Control rod travel<br>mm<br>9 | rev/min<br>10         | mm<br>11              |
| ca. 68                                     | 1050<br>1350                             | 15,2-17,8<br>0 - 1,0                     | -  | -            | -                             | ca. 8                                      | 100<br>225<br>290-350=2,0 | min. 5,3<br>3,7-3,9           | 225<br>360<br>1050    | 1,3<br>2,5-2,9<br>8,2 |
| ca. 64                                     | 12,4<br>4,0                              | 1090-1100<br>1190-1220                   |  |              |                               | 3a   |                           |                               |                       |                       |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |   | Rotational-speed limitation<br>intermediate speed ②b | Fuel delivery characteristics<br>high idle speed ⑤b |   | Starting fuel delivery<br>Idle switching point ⑥ |                                    | Torque-control travel ⑤ |                               |
|---|---|--|---|---|--|------------------------------------|-------------------------|-------------------------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2      | rev/min<br>3   | rev/min<br>4  | cm <sup>3</sup> /1000 strokes<br>5      | rev/min<br>6                                     | cm <sup>3</sup> /1000 strokes<br>7 | rev/min<br>8            | Control rod travel<br>mm<br>9 |
| LDA<br>1050   | 0,7 bar<br>166,0-168,0<br>(163,0-171,0) | 1090-1100*   | LDA<br>600  | 0,7 bar<br>169,0-173,0<br>(166,0-176,0) | 100  | 220,0-270,0                        |                         |                               |
|   |   |  | LDA<br>500  | 0 bar<br>126,0-130,0<br>(123,0-133,0)   | 255  | 9-13**                             |                         |                               |

Checking values in brackets

\* 1 mm less control rod travel than col. 2



# D. Adjustment Test for Manifold Pressure Compensator

Test at n = 500 rev/min decreasing pressure - in bar gauge pressure

SCA 11,0 r 2

| Pump/governor | Setting<br>Gauge pressure = bar | Measurement<br>Gauge pressure = bar | Control rod travel-<br>diminution<br>difference<br>mm (1) |
|---------------|---------------------------------|-------------------------------------|---|
| 3040 with 379 | 0,41                            | 0,25                                | 12,9 - 13,0<br>11,8 - 12,0                                |

Notes.

(1) when n =

rev/min and  
gauge pressure =

bar (= maximum full-load control rod travel)

# Test Specifications Fuel Injection Pumps ① and Governors

En

PES 6 P 110 A 320 RS 211

RQV 300...1100 PA 173 KR

supersedes

0 402 046 056

company Allis-Chalmers

1 - 5 - 3 - 6 - 2 - 4

engine 11000

Values only apply to test nozzle-and-holder assembly 0 681 343 009 and fuel-injection  
test tubing 9 681 230 704

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod<br>travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /<br>100 strokes<br>4 | Control rod<br>travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|----------------------------------|--|---|----------------------------------|--|--|
| 1000                             | 12                               | 16,0 - 16,8  |   |                                  |  |  |
| 600                              | 9                                | 8,5 - 9,7  |   |                                  |  |  |
|                                  | 12                               | 15,2 - 16,7  |   |                                  |  |  |
|                                  | 15                               | 21,5 - 23,3  |   |                                  |  |  |
| 200                              | 9                                | 6,8 - 8,1  |   |                                  |  |  |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

| Upper rated speed                              |  |  | Intermediate rated speed                       |         |                             | Lower rated speed                              |         |                             | Sliding sleeve travel |         |
|--|--|--|--|---------|-----------------------------|--|---------|-----------------------------|-----------------------|---------|
| Degree of<br>deflection of<br>control<br>lever | rev/min<br>Control<br>rod travel<br>mm | Control rod<br>travel<br>mm<br>rev/min | Degree of<br>deflection of<br>control<br>lever | rev/min | Control rod<br>travel<br>mm | Degree of<br>deflection of<br>control<br>lever | rev/min | Control rod<br>travel<br>mm | rev/min               | mm      |
| 1  | 2                                      | 3                                      | 4  | 5       | 6                           | 7  | 8       | 9                           | 10                    | 11      |
| 66°  | 1100                                   | 14,8-17,6                              |  |         |                             | 10°  | 250     | 6,2-8,0                     | 350                   | 1,8-3,0 |
|  | 1150                                   | 10,7-14,7                              |  |         |                             |  | 300     | 4,2-6,5                     | 600                   | 3,9-4,4 |
|  | 1200                                   | 6,0-11,4                               |  |         |                             |  | 400     | 0,2-5,6                     | 1000                  | 7,0-7,4 |
|  | 1280                                   | 0- 5,6                                 |  |         |                             |  | 570     | 0                           |                       |         |
|  | 1360                                   | 0                                      |  |         |                             |  |         |                             |                       |         |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Rotational speed (2b)<br>limitation<br>intermediate speed |                               | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>Idle<br>switching point (6) |                               | Torque-control (5)<br>travel |                             |
|---|-------------------------------|---|-------------------------------|--|-------------------------------|---|-------------------------------|------------------------------|-----------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                      | Control rod<br>travel<br>mm |
| 1   | 2                             | 3   | 4                             | 5  | 6                             | 7   | 8                             | 9                            |                             |
|   |                               |   |                               |  |                               |   |                               |                              |                             |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

Testoil-ISO 4113

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
|---|-------------------------------|--------------------------------------|---|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3                                    | 4a  | 5                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 320 754

1025 91,0- 93,0 1040 700 99,0-103,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 793

1000 122,0-124,0 1020 700 126,0-130,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 815

900 100,0-106,0 910-920 700 101,0-107,0 100 90,0-130,0 300 19,0-25,0  
600 111,0-117,0

AC-Nr. 4 320 816

900 97,0-103,0 910-920 800 98,0-104,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 817

1100 139,0-143,0 1120 800 149,0-154,0 100 90,0-130,0 375 9,0-19,0  
600 153,0-161,0

AC-Nr. 4 320 829

1100 139,0-143,0 1120 800 149,0-154,0 100 90,0-130,0 375 9,0-19,0  
600 153,0-161,0

AC-Nr. 4 320 933

900 102,0-110,0 1040 800 107,0-116,0 100 90,0-130,0 300 25,0

AC-Nr. 4 320 939

900 98,5 ± 3 1040 700 107,5 ± 4 100 90,0-130,0 300 25,0

AC-Nr. 4 320 940

900 78,0- 86,0 1040 700 100,0-109,0 100 90,0-130,0 300 25,0

AC-Nr. 4 320 941

1025 91,0- 93,0 1040 700 99,0-103,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 942

1000 122,0-124,0 1020 700 126,0-130,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 980

900 108,0-116,0 1120 800 - 100 90,0-130,0 375 9,0-19,0

AC-Nr. 4 320 981

900 111,0-119,0 1020 800 112,0-118,0 100 90,0-130,0 300 25,0

AC-Nr. 4 321 016

750 95,0-101,0 1020 750 95,0-101,0 100 90,0-130,0 300 25,0

AC-Nr. 4 321 064

1000 112,0 1030 800 112,5 100 90,0-130,0 300 25,0

Testoil-ISO 4113

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |                                       |   |                               |   |                               |                  |                             |
|---|-------------------------------|---------------------------------------|---|-------------------------------|---|-------------------------------|------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                               | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                               | Starting fuel delivery<br>idle<br>switching point ⑥ |                               | Low idle speed ⑤ |                             |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                               | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                             | 3                                     | 1   | 2                             | 6   | 7                             | 8                | 9                           |

AC-Nr. 4 359 816

|     |             |         |     |             |     |            |     |           |
|-----|-------------|---------|-----|-------------|-----|------------|-----|-----------|
| 900 | 100,0-106,0 | 910-920 | 700 | 101,0-107,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|     |             |         | 600 | 111,0-117,0 |     |            |     |           |

AC-Nr. 4 359 826

|     |            |         |     |            |     |            |     |           |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|
| 900 | 97,0-103,0 | 910-920 | 800 | 98,0-104,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 828

|      |             |      |     |             |     |            |     |          |
|------|-------------|------|-----|-------------|-----|------------|-----|----------|
| 1100 | 139,0-143,0 | 1120 | 800 | 149,0-154,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0 |
|      |             |      | 600 | 153,0-161,0 |     |            |     |          |

AC-Nr. 4 359 830

|      |            |      |     |            |     |            |     |           |
|------|------------|------|-----|------------|-----|------------|-----|-----------|
| 1025 | 91,0- 93,0 | 1040 | 700 | 99,0-103,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|------------|------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 832

|      |             |      |     |             |     |            |     |           |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|
| 1000 | 122,0-124,0 | 1020 | 700 | 126,0-130,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|

AC-Nr. 4 392 693

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 205,0-215,0 | 1065-80 | 900 | 167,0-177,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 695

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 900 | 149,0-155,0 | 920 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

AC-Nr. 4 392 697

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 699

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 701

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 703

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-230,0 | 1060-70 | 900 | 200,0-210,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 205,0-215,0 |     |             |     |           |

AC-Nr. 4 392 707

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 243,0-253,0 | 1060-80 | 900 | 222,0-232,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 235,0-245,0 |     |             |     |           |

AC-Nr. 4 392 709

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 392 711

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 600 | 231,0-237,0 | 620 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |   |    |
|---|------------------|---------------------------------------|---|------------------|---|------------------|---|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤<br>Control rod<br>travel |    |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min                                   | mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8   | 9  |

AC-Nr. 4 392 715

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 392 717

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 719

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 392 721

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

AC-Nr. 4 392 723

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 725

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 727

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 729

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 731

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 392 735

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 392 737

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 392 739

1050 207,0-213,0 1050 900 195,0-201,0 100 130,0-170,0 300 19,0-25,0  
700 225,0-231,0

AC-Nr. 4 392 741

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 392 743

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤ |                       |
|---|------------------|---------------------------------------|---|------------------|--|------------------|------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3                                     | 1   | 2                | 6  | 7                | 8                | 9                     |

AC-Nr. 4 392 747

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 227,0-233,0 | 1070 | 900 | 208,0-214,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 247,0-253,0 |     |             |     |           |

AC-Nr. 4 392 749

|      |             |      |   |   |     |             |     |           |
|------|-------------|------|---|---|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 392 750

|      |             |      |   |   |     |             |     |           |
|------|-------------|------|---|---|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 392 768

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 123,0-133,0 | 820 | 600 | 132,0-142,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 775/776

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 875 | 162,0-164,0 | 890 | 600 | 140,0-144,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 777

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 205,0-207,0 | 970 | 700 | 195,0-199,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 778

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 3 392 779

|      |             |         |      |             |     |             |     |           |
|------|-------------|---------|------|-------------|-----|-------------|-----|-----------|
| 1025 | 190,0-200,0 | 1030-40 | 1000 | 191,0-201,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 900  | 178,0-188,0 |     |             |     |           |

AC-Nr. 4 392 781

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1025 | 228,0-238,0 | 1050-60 | 900 | 205,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 207,0-217,0 |     |             |     |           |

AC-Nr. 4 392 953

|     |             |        |   |   |     |             |     |           |
|-----|-------------|--------|---|---|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 393 095

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-221,0 | 1060-80 | 900 | 210,0-220,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 238,0-248,0 |     |             |     |           |

AC-Nr. 4 393 307

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 210,0-216,0 | 920 | 700 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 393 431

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 393 821

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 242,0-248,0 | 1070 | 900 | 220,0-226,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 230,0-236,0 |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |   |                               |   |                               |   |   |
|---|-------------------------------|---|---|-------------------------------|---|-------------------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery (2)<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Starting fuel delivery (6)<br>Idle<br>switching point |                               | Low idle speed (5)<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   |   |
| 1   | 2                             | 3   | 4   | 5                             | 6   | 7                             | 8   | 9 |

AC-Nr. 4 393 823

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 393 825

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 827

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 393 829

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 831

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 393 833

1050 264,0 1060-1080 900 280,5 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 835

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

AC-Nr. 4 393 837

1050 227,0-233,0 1070 900 208,0-214,0 100 130,0-170,0 300 19,0-25,0  
700 247,0-253,0

AC-Nr. 4 393 890

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 393 891

955 208,0 965-975 895 203,0 - - - -

AC-Nr. 4 393 961

900 181,0-187,0 920 700 172,0-178,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 001

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 017

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 394 020

700 249,0-257,0 725 600 258,0-264,0 100 130,0-170,0 300 19,0-29,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |   |                  |   |                  |   |   |
|---|------------------|---|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Starting fuel delivery<br>idle<br>switching point (6) |                  | Low idle speed (5)<br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 4   | 5                | 6   | 7                | 8   | 9 |

|                  |      |             |        |            |                            |     |             |     |           |
|------------------|------|-------------|--------|------------|----------------------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 062 | 800  | 113,0-119,0 | 820    | 600        | 102,0-108,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 064 | 875  | 161,0-165,0 | 890    | 600        | 140,0-144,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 066 | 800  | 125,0-131,0 | 820    | 600        | 134,0-140,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 068 | 1025 | 192,0-198,0 | 1045   | 900        | 180,0-186,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 070 | 1000 | 200,0-206,0 | 1020   | 800<br>600 | 180,0-186,0<br>189,0-195,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 072 | 940  | 185,0-195,0 | 955-65 | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 074 | 1025 | 230,0-236,0 | 1040   | 900<br>700 | 207,0-213,0<br>209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 076 | 1000 | 227,0-233,0 | 1020   | 800        | 197,0-203,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 078 | 1000 | 235,0-241,0 | 1020   | 700        | 263,0-269,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 080 | 1000 | 220,0-226,0 | 1020   | 800<br>600 | 209,0-215,0<br>227,0-233,0 | 100 | 130,0-170,0 | 300 | 19,0,25,0 |
| AC-Nr. 4 394 082 | 910  | 190,0       | 930    | -          | -                          | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 084 | 900  | 160,0-166,0 | 920    | 700        | 139,0-145,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 086 | 600  | 124,0-130,0 | 620    | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 088 | 700  | 127,0-133,0 | 720    | 600        | 124,0-130,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 090 | 800  | 139,0-145,0 | 820    | 600        | 124,0-130,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Full-load delivery<br>Control rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|--------------------------------------|---|-------------------------------|---|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3                                    | 4a  | 5                             | 6   | 7                             | 8                  | 9                     |

AC-Nr. 4 394 092

925 157,0-163,0 945 800 145,0-151,0 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

AC-Nr. 4 394 094

1000 180,0-186,0 1020 800 154,0-160,0 100 130,0-170,0 300 19,0-25,0  
700 142,0-148,0

AC-Nr. 4 394 096

1050 207,0-213,0 1070 900 161,0-175,0 100 130,0-170,0 300 19,0-25,0  
800 147,0-153,0

AC-Nr. 4 394 098

900 187,0-193,0 920 700 162,0-168,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 100

900 200,0-206,0 920 700 184,0-190,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 102

900 203,0-209,0 920 700 209,0-215,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 104

750 185,0-191,0 770 600 222,0-228,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 106

800 210,0-218,0 820 600 223,0-229,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 108

1050 222,0-228,0 1070 900 202,0-208,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-213,0

AC-Nr. 4 394 110

1000 240,0-246,0 1020 800 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
600 237,0-243,0

AC-Nr. 4 394 112

1050 245,0-251,0 1070 900 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
700 237,0-243,0

AC-Nr. 4 394 114

1000 217,0-223,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 219,0-225,0

AC-Nr. 4 394 116

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 118

1050 260,0-275,0 1070 900 281,0-287,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |   |   |
|---|------------------|---------------------------------------|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>idle<br>switching point |                  | Low idle speed ⑤<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8   | 9 |

AC-Nr. 4 394 120

1050 234,0-240,0 1070 900 246,0-252,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 122

1050 262,0-268,0 1070 900 279,0-285,0 100 130,0-170,0 300 19,0-25,0  
700 289,0-295,0

AC-Nr. 4 394 124

1050 241,0-247,0 1070 900 265,0-271,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 126

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 128

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 130

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 132

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 134

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 136

1000 255,0-261,0 1020 800 272,0-278,0 100 130,0-170,0 300 19,0-25,0  
600 270,0-276,0

AC-Nr. 4 394 138

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 394 140

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 394 142

900 222,0-228,0 920 700 254,0-260,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 144

1050 257,0-263,0 1070 750 272,0-278,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 148

1050 295,0-303,0 1075 900 309,0-315,0 100 130,0-170,0 300 25,0

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |   |                  |   |                  |   |   |
|---|------------------|---|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery (2)<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery (6)<br>idle<br>switching point |                  | Low idle speed (5)<br><br>Control rod travel mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 1   | 2                | 6   | 7                | 8   | 9 |

AC-Nr. 4 394 150

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 | 900 | 274,0-280,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 280,0-286,0 |     |             |     |           |

AC-Nr. 4 394 152

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 267,0-273,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 267,0-273,0 |     |             |     |           |

AC-Nr. 4 394 154

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 | 900 | 283,0-289,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

AC-Nr. 4 394 156

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 | 900 | 301,0-307,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 309,0-315,0 |     |             |     |           |

AC-Nr. 4 394 158  
" 4 394 157

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 | 900 | 252,0-258,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 160

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 394 162

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 164

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 | 800 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|     |             |     | 700 | 177,0-183,0 |     |             |     |           |

AC-Nr. 4 394 166

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 | 800 | 160,0-166,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 168

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 | 800 | 251,0-257,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|     |             |     | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 170

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 176

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1070 | 900 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 240,0-246,0 |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |   |   |
|---|------------------|---|--|------------------|--|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                     |   |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9 |

AC-Nr. 4 394 246

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |     |           |
|      |             |           | 600 | 255,5-266,0 |     |             |     |           |

Tilt stop part position to obtain quantity at 1050 PRM.

Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 250

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 257

|     |       |  |  |  |     |             |     |      |
|-----|-------|--|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 314

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 331

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 265,0-271,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 332

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 274,0-280,0 |      |  |  |     |             |     |           |
| 700  | 280,0-286,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 347

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 281,0-287,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 348

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 246,0-252,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 349

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 350

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 279,0-285,0 |      |  |  |     |             |     |           |
| 700  | 289,0-295,0 |      |  |  |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|--------------------------------------|---|------------------|--|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                              | rev/min   | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3                                    | 4   | 5                | 6  | 7                | 8                  | 9                     |

AC-Nr. 4 394 351

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |     |             |     |           |

AC-Nr. 4 394 352

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 267,0-273,0 |      |  |     |             |     |           |
| 700  | 267,0-273,0 |      |  |     |             |     |           |

AC-Nr. 4 394 353

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 283,0-289,0 |      |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |     |             |     |           |

AC-Nr. 4 394 354

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |     |             |     |           |

AC-Nr. 4 394 356

|      |       |      |  |     |             |     |           |
|------|-------|------|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |     |             |     |           |
| 700  | 267,0 |      |  |     |             |     |           |

AC-Nr. 4 394 386

|     |             |     |  |     |             |     |      |
|-----|-------------|-----|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|--|-----|-------------|-----|------|

AC-Nr. 4 394 390

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 |  | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |  |     |             |     |           |

AC-Nr. 4 394 428

|      |             |      |  |     |             |     |      |
|------|-------------|------|--|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |  |     |             |     |      |

AC-Nr. 4 394 473

|     |             |     |  |     |             |     |      |
|-----|-------------|-----|--|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 |  | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |  |     |             |     |      |

AC-Nr. 4 394 501

|     |       |     |  |     |             |     |           |
|-----|-------|-----|--|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |  |     |             |     |           |

AC-Nr. 4 394 521

|      |             |      |  |     |             |     |      |
|------|-------------|------|--|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |  |     |             |     |      |

AC-Nr. 4 394 527

|     |       |     |  |     |             |     |           |
|-----|-------|-----|--|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |  |     |             |     |           |

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |                    |                       |
|---|------------------|---|--|------------------|--|------------------|--------------------|-----------------------|
| Full-load delivery<br>Control rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8                  | 9                     |

AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 740/741

|      |             |           |
|------|-------------|-----------|
| 1020 | 213,0-226,0 | 1030-1040 |
| 915  | 208,0-218,0 |           |

AC-Nr. 4 394 744

|      |       |           |     |             |     |           |
|------|-------|-----------|-----|-------------|-----|-----------|
| 1050 | 250,0 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 256,0 |           |     |             |     |           |

AC-Nr. 4 394 745

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| 750 | 196,0-202,0 |     |     |             |     |           |

AC-Nr. 4 394 746

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 875 | 161,0-165,0 | 890 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 140,0-144,0 |     |     |             |     |           |

AC-Nr. 4 394 771

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 113,0-119,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 102,0-108,0 |     |     |             |     |           |

AC-Nr. 4 394 773

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 125,0-131,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 134,0-140,0 |     |     |             |     |           |

AC-Nr. 4 394 775

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 192,0-198,0 | 1045 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 180,0-186,0 |      |     |             |     |           |

AC-Nr. 4 394 777

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 200,0-206,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 180,0-186,0 |      |     |             |     |           |
| 600  | 189,0-195,0 |      |     |             |     |           |

AC-Nr. 4 394 779

|     |             |        |     |             |     |           |
|-----|-------------|--------|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|-----|-------------|-----|-----------|

AC-Nr. 4 394 781

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 230,0-236,0 | 1040 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 207,0-213,0 |      |     |             |     |           |
| 700  | 209,0-215,0 |      |     |             |     |           |

AC-Nr. 4 394 783

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 227,0-233,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 197,0-203,0 |      |     |             |     |           |

AC-Nr. 4 394 785

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 235,0-241,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700  | 263,0-269,0 |      |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |   |                       |
|---|------------------|---|--|------------------|--|------------------|---|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a)<br>rev/min (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b)<br>rev/min (5b)   cm³/1000 strokes (5b) |                  | Starting fuel delivery<br>idle switching point (6)<br>rev/min (6)   cm³/1000 strokes (6) |                  | Low idle speed (5)<br>rev/min (5)   Control rod travel mm (5) |                       |
| rev/min   | cm³/1000 strokes | rev/min   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min   | Control rod travel mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9                     |

AC-Nr. 4 394 787

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1000 | 220,0-226,0 | 1020 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 209,0-215,0 |      |  |  |     |             |     |           |
| 600  | 227,0-233,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 789

|     |       |     |  |  |     |             |     |      |
|-----|-------|-----|--|--|-----|-------------|-----|------|
| 910 | 190,0 | 930 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 791

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 160,0-166,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 139,0-145,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 793

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 600 | 124,0-130,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 795

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 127,0-133,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 797

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 800 | 139,0-145,0 | 820 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 799

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 925 | 157,0-163,0 | 945 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 145,0-151,0 |     |  |  |     |             |     |           |
| 600 | 134,0-140,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 801

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 154,0-160,0 |      |  |  |     |             |     |           |
| 700  | 142,0-148,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 803

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 161,0-175,0 |      |  |  |     |             |     |           |
| 800  | 147,0-153,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 805

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 162,0-168,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 807

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 184,0-190,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 809

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 209,0-215,0 |     |  |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |   | Breakaway<br>intermediate speed (2b)<br>rev/min (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b)<br>rev/min (4a) cm³/1000 strokes (5b) |   | Starting fuel delivery<br>idle switching point (6)<br>rev/min (6) cm³/1000 strokes (7) |   | Low idle speed (5)<br>rev/min (8) Control rod travel mm (9) |   |
|---|---|--|--|---|--|---|---|---|
| 1   | 2 | 3  | 4  | 5 | 6  | 7 | 8   | 9 |

-16-

AC-Nr. 4 394 811

750 185,0-191,0  
600 222,0-228,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0  
600 223,0-229,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0  
900 202,0-208,0  
700 207,0-213,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 817

1000 240,0-246,0  
800 224,0-230,0  
600 237,0-243,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 819

1050 245,0-251,0  
900 224,0-230,0  
700 237,0-243,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 821

1000 217,0-223,0  
800 197,0-203,0  
600 219,0-225,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 823

900 210,0-216,0  
700 212,0-218,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0  
900 281,0-287,0  
700 293,0-299,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 827

1050 234,0-240,0  
900 246,0-252,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 829

1050 262,0-268,0  
900 279,0-285,0  
700 289,0-295,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 831

1050 241,0-247,0  
900 265,0-271,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|--------------------------------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3                                    | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

-17-

AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |                    |                       |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

-18-

AC-Nr. 4 394 861

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |     |             |     |           |

AC-Nr. 4 394 863

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |     |             |     |           |

AC-Nr. 4 394 865

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |     |             |     |           |

AC-Nr. 4 394 867

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 172,0-178,0 |     |  |     |             |     |           |

AC-Nr. 4 394 869

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 162,0-168,0 |     |  |     |             |     |           |
| 700 | 177,0-183,0 |     |  |     |             |     |           |

AC-Nr. 4 394 871

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 160,0-166,0 |     |  |     |             |     |           |

AC-Nr. 4 394 873

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 800 | 251,0-257,0 |     |  |     |             |     |           |
| 700 | 269,0-275,0 |     |  |     |             |     |           |

AC-Nr. 4 394 875

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 600 | 240,0-246,0 |     |  |     |             |     |           |

AC-Nr. 4 394 877

|      |             |           |  |     |             |     |           |
|------|-------------|-----------|--|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1060-1080 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 212,0-218,0 |           |  |     |             |     |           |
| 700  | 240,0-246,0 |           |  |     |             |     |           |

AC-Nr. 4 394 879

|      |             |           |     |             |     |             |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |           |
|      |             |           | 600 | 255,5-266,0 |     |             |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|---|--|------------------|--|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8                  | 9                     |

-19-

AC-Nr. 4 394 881

700 246,0  
600 263,0

720

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 883

1050 244,5-254,5

1060-1080

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 885

600 258,0

100 130,0-170,0 300 27,0

AC-Nr. 4 394 891

600 167,0-175,0

620

100 130,0-170,0 300 25,0

AC-Nr. 4 394 893

900 259,0-267,0  
700 238,0-246,0

925

100 130,0-170,0 300 19,0-29,0

AC-Nr. 4 394 895

1000 188,0-196,0  
800 180,0-187,0

1025

100 130,0-170,0 300 25,0

AC-Nr. 4 394 897

850 189,0-197,0  
750 185,0-193,0

875

100 130,0-170,0 325 30,0

AC-Nr. 4 394 899

900 175,0  
700 158,0

925

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 905

1000 239,0-247,0  
700 229,0-235,0

1025

100 130,0-170,0 300 25,0

AC-Nr. 4 394 907

900 161,0  
800 151,0

925

100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

1050 202,0-210,5

1060-1080

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 911

1000 230,5-239,5

1010-1030

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 915

1000 203,0-211,5

1010-1030

100 130,0-170,0 300 19,0-25,0

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |  |    |
|---|------------------|---|--|------------------|--|------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br><br>Control rod travel |    |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                      | mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8  | 9  |
|   |                  |   |  |                  |  |                  |  |    |

-20-

AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

①

# Test Specifications Fuel Injection Pumps ① and Governors

40

WPP 001/4 ALO 16,0 b

En

PE 6 P 120/420 LS 152

RQV 300...1050 PA 154 KR

supersedes

0 401 846 178 ; 0 401 846 228

company Allis-Chalmers

1 - 5 - 3 - 6 - 2 - 4

engine 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1000                             | 12                            | 26,4 - 27,1  |   |                               | 1,0  |  |
| 600                              | 6                             | 8,6 - 9,8  |   |                               |  |  |
|                                  | 12                            | 26,2 - 28,2  |   |                               |  |  |
|                                  | 15                            | 33,8 - 36,2  |   |                               |  |  |
| 200                              | 6                             | 4,2 - 5,2  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in .

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## B. Governor Settings

| Upper rated speed                     |                                     |                                     | Intermediate rated speed              |         |                          | Lower rated speed                     |         |                          | Sliding sleeve travel |    |
|---------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------|---------|--------------------------|---------------------------------------|---------|--------------------------|-----------------------|----|
| Degree of deflection of control lever | rev/min<br>Control rod travel<br>mm | Control rod travel<br>mm<br>rev/min | Degree of deflection of control lever | rev/min | Control rod travel<br>mm | Degree of deflection of control lever | rev/min | Control rod travel<br>mm | rev/min               | mm |
| 1                                     | 2                                   | 3                                   | 4                                     | 5       | 6                        | 7                                     | 8       | 9                        | 10                    | 11 |
| 66°                                   | 1050                                | 15,0-18,0                           |                                       |         |                          | 10°                                   | 250     | 6,4-8,0                  |                       |    |
|                                       | 1100                                | 10,7-15,0                           |                                       |         |                          |                                       | 350     | 3,0-5,2                  |                       |    |
|                                       | 1150                                | 6,0-11,6                            |                                       |         |                          |                                       | 450     | 1,3-2,8                  |                       |    |
|                                       | 1210                                | 0,7                                 |                                       |         |                          |                                       | 550     | 0                        |                       |    |
|                                       |                                     |                                     |                                       |         |                          | ③a                                    |         |                          |                       |    |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Rotational-speed limitation<br>intermediate speed | Fuel delivery characteristics<br>high idle speed |                               | Starting fuel delivery<br>Idle switching point |                               | Torque-control travel |                          |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|-----------------------|--------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min               | Control rod travel<br>mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                     | 9                        |
|   |                               |   |  |                               |  |                               |                       |                          |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |                  |                             |
|---|------------------|---------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8                | 9                           |

AC-Nr. 4 320 754

1025 91,0- 93,0 1040 700 99,0-103,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 793

1000 122,0-124,0 1020 700 126,0-130,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 815

900 100,0-106,0 910-920 700 101,0-107,0 100 90,0-130,0 300 19,0-25,0  
600 111,0-117,0

AC-Nr. 4 320 816

900 97,0-103,0 910-920 800 98,0-104,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 817

1100 139,0-143,0 1120 800 149,0-154,0 100 90,0-130,0 375 9,0-19,0  
600 153,0-161,0

AC-Nr. 4 320 829

1100 139,0-143,0 1120 800 149,0-154,0 100 90,0-130,0 375 9,0-19,0  
600 153,0-161,0

AC-Nr. 4 320 933

900 102,0-110,0 1040 800 107,0-116,0 100 90,0-130,0 300 25,0

AC-Nr. 4 320 939

900 98,5 ± 3 1040 700 107,5 ± 4 100 90,0-130,0 300 25,0

AC-Nr. 4 320 940

900 78,0- 86,0 1040 700 100,0-109,0 100 90,0-130,0 300 25,0

AC-Nr. 4 320 941

1025 91,0- 93,0 1040 700 99,0-103,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 942

1000 122,0-124,0 1020 700 126,0-130,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 980

900 108,0-116,0 1120 800 - 100 90,0-130,0 375 9,0-19,0

AC-Nr. 4 320 981

900 111,0-119,0 1020 800 112,0-118,0 100 90,0-130,0 300 25,0

AC-Nr. 4 321 016

750 95,0-101,0 1020 750 95,0-101,0 100 90,0-130,0 300 25,0

AC-Nr. 4 321 064

1000 112,0 1030 800 112,5 100 90,0-130,0 300 25,0

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Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |   |  |   |   |   |   |   |   |
|---|---|--|---|---|---|---|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |   | Breakaway ②b<br>intermediate speed ④a<br>rev/min | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F)<br>rev/min cm³/1000 strokes |   | Starting fuel delivery ⑥<br>idle<br>switching point<br>rev/min cm³/1000 strokes |   | Low idle speed ⑤<br>Control rod travel<br>mm<br>rev/min |   |
| 1   | 2 | 3  | 1   | 2 | 6   | 7 | 8   | 9 |

AC-Nr. 4 359 816

|     |             |         |     |             |     |            |     |           |
|-----|-------------|---------|-----|-------------|-----|------------|-----|-----------|
| 900 | 100,0-106,0 | 910-920 | 700 | 101,0-107,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|     |             |         | 600 | 111,0-117,0 |     |            |     |           |

AC-Nr. 4 359 826

|     |            |         |     |            |     |            |     |           |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|
| 900 | 97,0-103,0 | 910-920 | 800 | 98,0-104,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 828

|      |             |      |     |             |     |            |     |          |
|------|-------------|------|-----|-------------|-----|------------|-----|----------|
| 1100 | 139,0-143,0 | 1120 | 800 | 149,0-154,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0 |
|      |             |      | 600 | 153,0-161,0 |     |            |     |          |

AC-Nr. 4 359 830

|      |            |      |     |            |     |            |     |           |
|------|------------|------|-----|------------|-----|------------|-----|-----------|
| 1025 | 91,0- 93,0 | 1040 | 700 | 99,0-103,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|------------|------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 832

|      |             |      |     |             |     |            |     |           |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|
| 1000 | 122,0-124,0 | 1020 | 700 | 126,0-130,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|

AC-Nr. 4 392 693

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 205,0-215,0 | 1065-80 | 900 | 167,0-177,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 695

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 900 | 149,0-155,0 | 920 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

AC-Nr. 4 392 697

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 699

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 701

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 703

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-230,0 | 1060-70 | 900 | 200,0-210,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 205,0-215,0 |     |             |     |           |

AC-Nr. 4 392 707

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 243,0-253,0 | 1060-80 | 900 | 222,0-232,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 235,0-245,0 |     |             |     |           |

AC-Nr. 4 392 709

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 392 711

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 600 | 231,0-237,0 | 620 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|



## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
|---|------------------|------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                  | 4a  | 5                | 6   | 7                | 8                | 9                           |

AC-Nr. 4 392 715

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 392 717

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 719

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 392 721

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

AC-Nr. 4 392 723

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 725

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 727

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 729

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 731

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 392 735

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 392 737

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 392 739

1050 207,0-213,0 1050 900 195,0-201,0 100 130,0-170,0 300 19,0-25,0  
700 225,0-231,0

AC-Nr. 4 392 741

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 392 743

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |                  |                             |
|---|------------------|---------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8                | 9                           |

AC-Nr. 4 392 747

1050 227,0-233,0 1070 900 208,0-214,0 100 130,0-170,0 300 19,0-25,0  
700 247,0-253,0

AC-Nr. 4 392 749

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 750

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 768

800 123,0-133,0 820 600 132,0-142,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 775/776

875 162,0-164,0 890 600 140,0-144,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 777

950 205,0-207,0 970 700 195,0-199,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 778

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 3 392 779

1025 190,0-200,0 1030-40 1000 191,0-201,0 100 130,0-170,0 300 19,0-25,0  
900 178,0-188,0

AC-Nr. 4 392 781

1025 228,0-238,0 1050-60 900 205,0-215,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-217,0

AC-Nr. 4 392 953

940 185,0-195,0 955-65 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 095

1050 211,0-221,0 1060-80 900 210,0-220,0 100 130,0-170,0 300 19,0-25,0  
700 238,0-248,0

AC-Nr. 4 393 307

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 393 431

1050 208,0-214,0 1070 900 230,0-235,0 100 130,0-170,0 300 19,0-25,0  
700 260,0-266,0

AC-Nr. 4 393 821

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |   |   |
|---|------------------|---------------------------------------|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>idle<br>switching point |                  | Low idle speed ⑤<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8   | 9 |

AC-Nr. 4 393 823

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 187,0-193,0 | 1070 | 900 | 174,0-180,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 175,0-181,0 |     |             |     |           |

AC-Nr. 4 393 825

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 224,0-230,0 | 1070 | 800 | 185,0-191,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 393 827

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 200,0-206,0 | 1070 | 900 | 190,0-196,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 214,0-220,0 |     |             |     |           |

AC-Nr. 4 393 829

|      |             |      |   |   |     |             |     |           |
|------|-------------|------|---|---|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 393 831

|      |             |      |     |             |     |             |   |   |
|------|-------------|------|-----|-------------|-----|-------------|---|---|
| 1050 | 213,0-219,0 | 1070 | 900 | 202,0-208,0 | 100 | 130,0-170,0 | - | - |
|      |             |      | 700 | 230,0-236,0 |     |             |   |   |

AC-Nr. 4 393 833

|      |       |           |     |       |     |             |     |           |
|------|-------|-----------|-----|-------|-----|-------------|-----|-----------|
| 1050 | 264,0 | 1060-1080 | 900 | 280,5 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------|-----------|-----|-------|-----|-------------|-----|-----------|

AC-Nr. 4 393 835

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-226,0 | 1070 | 900 | 210,0-216,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 243,0-249,0 |     |             |     |           |

AC-Nr. 4 393 837

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 227,0-233,0 | 1070 | 900 | 208,0-214,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 247,0-253,0 |     |             |     |           |

AC-Nr. 4 393 890

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 393 891

|     |       |         |     |       |   |   |   |   |
|-----|-------|---------|-----|-------|---|---|---|---|
| 955 | 208,0 | 965-975 | 895 | 203,0 | - | - | - | - |
|-----|-------|---------|-----|-------|---|---|---|---|

AC-Nr. 4 393 961

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 001

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 017

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 020

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 249,0-257,0 | 725 | 600 | 258,0-264,0 | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |   |                  |   |                  |                    |                             |
|---|------------------|---|---|------------------|---|------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Starting fuel delivery<br>idle<br>switching point (6) |                  | Low idle speed (5) |                             |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                | 3   | 1   | 2                | 6   | 7                | 8                  | 9                           |

AC-Nr. 4 394 062

800 113,0-119,0 820 600 102,0-108,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 064

875 161,0-165,0 890 600 140,0-144,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 066

800 125,0-131,0 820 600 134,0-140,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 068

1025 192,0-198,0 1045 900 180,0-186,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 070

1000 200,0-206,0 1020 800 180,0-186,0 100 130,0-170,0 300 19,0-25,0  
600 189,0-195,0

AC-Nr. 4 394 072

940 185,0-195,0 955-65 - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 074

1025 230,0-236,0 1040 900 207,0-213,0 100 130,0-170,0 300 19,0-25,0  
700 209,0-215,0

AC-Nr. 4 394 076

1000 227,0-233,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 078

1000 235,0-241,0 1020 700 263,0-269,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 080

1000 220,0-226,0 1020 800 209,0-215,0 100 130,0-170,0 300 19,0-25,0  
600 227,0-233,0

AC-Nr. 4 394 082

910 190,0 930 - - 100 130,0-170,0 300 25,0

AC-Nr. 4 394 084

900 160,0-166,0 920 700 139,0-145,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 086

600 124,0-130,0 620 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 088

700 127,0-133,0 720 600 124,0-130,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 090

800 139,0-145,0 820 600 124,0-130,0 100 130,0-170,0 300 19,0-25,0

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## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
|---|-------------------------------|--------------------------------------|---|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3                                    | 1   | 2                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 394 092

925 157,0-163,0 945 800 145,0-151,0 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

AC-Nr. 4 394 094

1000 180,0-186,0 1020 800 154,0-160,0 100 130,0-170,0 300 19,0-25,0  
700 142,0-148,0

AC-Nr. 4 394 096

1050 207,0-213,0 1070 900 161,0-175,0 100 130,0-170,0 300 19,0-25,0  
800 147,0-153,0

AC-Nr. 4 394 098

900 187,0-193,0 920 700 162,0-168,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 100

900 200,0-206,0 920 700 184,0-190,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 102

900 203,0-209,0 920 700 209,0-215,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 104

750 185,0-191,0 770 600 222,0-228,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 106

800 210,0-218,0 820 600 223,0-229,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 108

1050 222,0-228,0 1070 900 202,0-208,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-213,0

AC-Nr. 4 394 110

1000 240,0-246,0 1020 800 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
600 237,0-243,0

AC-Nr. 4 394 112

1050 245,0-251,0 1070 900 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
700 237,0-243,0

AC-Nr. 4 394 114

1000 217,0-223,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 219,0-225,0

AC-Nr. 4 394 116

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 118

1050 269,0-275,0 1070 900 281,0-287,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |         |  |  |                               |  |         |  |         |
|---|---------|--|--|-------------------------------|--|---------|--|---------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |         | Breakaway (2b)<br>intermediate speed (4a)<br>rev/min | Full-load delivery (2)<br>Control-rod stop<br>Test oil temp. 40°C (104°F)<br>rev/min |                               | Starting fuel delivery (6)<br>Idle<br>switching point<br>rev/min |         | Low idle speed (5)<br>Control rod travel<br>mm |         |
| cm <sup>3</sup> /1000 strokes   | rev/min | cm <sup>3</sup> /1000 strokes                        | rev/min  | cm <sup>3</sup> /1000 strokes | cm <sup>3</sup> /1000 strokes                                    | rev/min | cm <sup>3</sup> /1000 strokes                  | rev/min |
| 1   | 2       | 3  | 1  | 2                             | 6  | 7       | 8  | 9       |

AC-Nr. 4 394 120

1050 234,0-240,0 1070 900 246,0-252,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 122

1050 262,0-268,0 1070 900 279,0-285,0 100 130,0-170,0 300 19,0-25,0  
700 289,0-295,0

AC-Nr. 4 394 124

1050 241,0-247,0 1070 900 265,0-271,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 126

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 128

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 130

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 132

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 134

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 136

1000 255,0-261,0 1020 800 272,0-278,0 100 130,0-170,0 300 19,0-25,0  
600 270,0-276,0

AC-Nr. 4 394 138

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 394 140

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 394 142

900 222,0-228,0 920 700 254,0-260,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 144

1050 257,0-263,0 1070 750 272,0-278,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 148

1050 295,0-303,0 1075 900 309,0-315,0 100 130,0-170,0 300 25,0

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |   |                  |  |                  |  |    |
|---|------------------|---|---|------------------|--|------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (20)<br>intermediate speed (48) | Full-load delivery (2)<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery (6)<br>Idle switching point |                  | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                  | mm |
| 1   | 2                | 3   | 1   | 2                | 6  | 7                | 8  | 9  |

AC-Nr. 4 394 150

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 | 900 | 274,0-280,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 280,0-286,0 |     |             |     |           |

AC-Nr. 4 394 152

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 267,0-273,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 267,0-273,0 |     |             |     |           |

AC-Nr. 4 394 154

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 | 900 | 283,0-289,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

AC-Nr. 4 394 156

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 | 900 | 301,0-307,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 309,0-315,0 |     |             |     |           |

AC-Nr. 4 394 158

" 4 394 157

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 | 900 | 252,0-258,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 160

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 394 162

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 164

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 | 800 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|     |             |     | 700 | 177,0-183,0 |     |             |     |           |

AC-Nr. 4 394 166

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 | 800 | 160,0-166,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 168

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 | 800 | 251,0-257,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|     |             |     | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 170

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 176

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1070 | 900 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 240,0-246,0 |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |  |    |
|---|------------------|---|--|------------------|--|------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br><br>Control rod travel |    |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                      | mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8  | 9  |

AC-Nr. 4 394 246

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |     |           |
|      |             |           | 600 | 255,5-266,0 |     |             |     |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 250

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 257

|     |       |  |  |  |     |             |     |      |
|-----|-------|--|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 314

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 331

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 265,0-271,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 332

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 274,0-280,0 |      |  |  |     |             |     |           |
| 700  | 280,0-286,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 347

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 281,0-287,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 348

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 246,0-252,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 349

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 350

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 279,0-285,0 |      |  |  |     |             |     |           |
| 700  | 289,0-295,0 |      |  |  |     |             |     |           |



# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤ |                       |
|---|------------------|------------------------------------|--|------------------|--|------------------|------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3                                  | 4  | 5                | 6  | 7                | 8                | 9                     |

AC-Nr. 4 394 351

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 352

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 267,0-273,0 |      |  |  |     |             |     |           |
| 700  | 267,0-273,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 353

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 283,0-289,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 354

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 356

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 386

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 390

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 428

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 473

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 |  |  | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |  |  |     |             |     |      |

AC-Nr. 4 394 501

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 521

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 527

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |  |  |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |  |    |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br><br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                      | mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8  | 9  |

AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full load delivery<br>Control rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) | Low idle speed (5)<br>Control rod travel mm |         |
|---|------------------|---|--|------------------|--|---|---------|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes                            | rev/min |
| 1   | 2                | 3   | 4  | 5                | 6  | 7   | 8       |

AC-Nr. 4 394 740/741

1020 213,0-226,0 1030-1040  
915 208,0-218,0

AC-Nr. 4 394 744

1050 250,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 745

950 208,0-214,0 990 100 130,0-170,0 300 21,0-27,0  
750 196,0-202,0

AC-Nr. 4 394 746

875 161,0-165,0 890 100 130,0-170,0 300 19,0-25,0  
600 140,0-144,0

AC-Nr. 4 394 771

800 113,0-119,0 820 100 130,0-170,0 300 19,0-25,0  
600 102,0-108,0

AC-Nr. 4 394 773

800 125,0-131,0 820 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

AC-Nr. 4 394 775

1025 192,0-198,0 1045 100 130,0-170,0 300 19,0-25,0  
900 180,0-186,0

AC-Nr. 4 394 777

1000 200,0-206,0 1020 100 130,0-170,0 300 19,0-25,0  
800 180,0-186,0  
600 189,0-195,0

AC-Nr. 4 394 779

940 185,0-195,0 955-65 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 781

1025 230,0-236,0 1040 100 130,0-170,0 300 19,0-25,0  
900 207,0-213,0  
700 209,0-215,0

AC-Nr. 4 394 783

1000 227,0-233,0 1020 100 130,0-170,0 300 19,0-25,0  
800 197,0-203,0

AC-Nr. 4 394 785

1000 235,0-241,0 1020 100 130,0-170,0 300 19,0-25,0  
700 263,0-269,0

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|--------------------------------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3                                    | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 787

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1000 | 220,0-226,0 | 1020 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 209,0-215,0 |      |  |  |     |             |     |           |
| 600  | 227,0-233,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 789

|     |       |     |  |  |     |             |     |      |
|-----|-------|-----|--|--|-----|-------------|-----|------|
| 910 | 190,0 | 930 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 791

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 160,0-166,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 139,0-145,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 793

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 600 | 124,0-130,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 795

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 127,0-133,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 797

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 800 | 139,0-145,0 | 820 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 799

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 925 | 157,0-163,0 | 945 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 145,0-151,0 |     |  |  |     |             |     |           |
| 600 | 134,0-140,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 801

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 154,0-160,0 |      |  |  |     |             |     |           |
| 700  | 142,0-148,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 803

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 161,0-175,0 |      |  |  |     |             |     |           |
| 800  | 147,0-153,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 805

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 162,0-168,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 807

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 184,0-190,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 809

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 209,0-215,0 |     |  |  |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |  |  |                  |  |                  |  |    |
|---|------------------|--|--|------------------|--|------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a)<br>rev/min | Fuel delivery characteristics (5a)<br>high idle speed (5b)<br>rev/min   cm³/1000 strokes |                  | Starting fuel delivery (6)<br>idle switching point<br>rev/min   cm³/1000 strokes |                  | Low idle speed (5)<br>Control rod travel<br>mm |    |
| rev/min   | cm³/1000 strokes | rev/min  | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min  | mm |
| 1   | 2                | 3  | 4  | 5                | 6  | 7                | 8  | 9  |

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AC-Nr. 4 394 811

750 185,0-191,0  
600 222,0-228,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0  
600 223,0-229,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0  
900 202,0-208,0  
700 207,0-213,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 817

1000 240,0-246,0  
800 224,0-230,0  
600 237,0-243,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 819

1050 245,0-251,0  
900 224,0-230,0  
700 237,0-243,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 821

1000 217,0-223,0  
800 197,0-203,0  
600 219,0-225,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 823

900 210,0-216,0  
700 212,0-218,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0  
900 281,0-287,0  
700 293,0-299,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 827

1050 234,0-240,0  
900 246,0-252,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 829

1050 262,0-268,0  
900 279,0-285,0  
700 289,0-295,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 831

1050 241,0-247,0  
900 265,0-271,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |                                      |   |                               |  |                               |                    |                       |
|---|-------------------------------|--------------------------------------|---|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min (4a)                         | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3                                    | 4   | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |  |                  |  |                  |  |    |
|---|------------------|---------------------------------------|--|------------------|--|------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                  | Starting fuel delivery ⑥<br>idle switching point |                  | Low idle speed ⑤<br>Control rod travel |    |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                | mm |
| 1   | 2                | 3                                     | 4  | 5                | 6  | 7                | 8                                      | 9  |
|   |                  |                                       |  |                  |  |                  |  |    |

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AC-Nr. 4 394 861

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 863

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 865

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 867

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 172,0-178,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 869

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 162,0-168,0 |     |  |  |     |             |     |           |
| 700 | 177,0-183,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 871

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 160,0-166,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 873

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 800 | 251,0-257,0 |     |  |  |     |             |     |           |
| 700 | 269,0-275,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 875

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 600 | 240,0-246,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 877

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 212,0-218,0 |           |  |  |     |             |     |           |
| 700  | 240,0-246,0 |           |  |  |     |             |     |           |

AC-Nr. 4 394 879

|      |             |           |     |             |     |             |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |           |
|      |             |           | 600 | 255,5-266,0 |     |             |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |  |    |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                  | mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8  | 9  |

AC-Nr. 4 394 881

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |     |             |     |           |

AC-Nr. 4 394 883

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 885

|     |       |  |     |             |     |      |
|-----|-------|--|-----|-------------|-----|------|
| 600 | 258,0 |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|-----|-------------|-----|------|

AC-Nr. 4 394 891

|     |             |     |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|-----|-------------|-----|------|

AC-Nr. 4 394 893

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |     |             |     |           |

AC-Nr. 4 394 895

|      |             |      |     |             |     |      |
|------|-------------|------|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |     |             |     |      |

AC-Nr. 4 394 897

|     |             |     |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |     |             |     |      |

AC-Nr. 4 394 899

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |     |             |     |           |

AC-Nr. 4 394 905

|      |             |      |     |             |     |      |
|------|-------------|------|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |     |             |     |      |

AC-Nr. 4 394 907

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |     |             |     |           |

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1050 | 202,0-210,5 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 911

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1000 | 230,5-239,5 | 1010-1030 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 915

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1000 | 203,0-211,5 | 1010-1030 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|



## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
|---|-------------------------------|--------------------------------------|--|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3                                    | 4  | 5                             | 6   | 7                             | 8                  | 9                           |

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AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

①

# Test Specifications Fuel Injection Pumps ① and Governors

40

WPP 001/4 ALO 16,0 a 1

En

PE 6 P 120 A 420 LS 152

RQV 300...875 PA 112 KR

supersedes

0 401 846 239

company Allis-Chalmers

1 - 5 - 3 - 6 - 2 - 4

engine 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8-2,9(2,75-2,95)mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1000                             | 12                            | 26,4 - 27,1  |   |                               | 1,0  |  |
| 200                              | 6                             | 4,2 - 5,2  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in 

## B. Governor Settings

| Upper rated speed                     |  |  | Intermediate rated speed              |              |                               | Lower rated speed                     |                          |                                    | Sliding sleeve travel                |                                    |
|---------------------------------------|--|--|---------------------------------------|--------------|-------------------------------|---------------------------------------|--------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Degree of deflection of control lever | rev/min<br>Control rod travel<br>mm<br>2 | Control rod travel<br>mm<br>rev/min<br>3 | Degree of deflection of control lever | rev/min<br>5 | Control rod travel<br>mm<br>4 | Degree of deflection of control lever | rev/min<br>8             | Control rod travel<br>mm<br>3      | rev/min<br>10                        | mm<br>11                           |
| 1                                     |  |  | 4                                     |              |                               | 7                                     |                          |                                    |                                      |                                    |
| 66°                                   | 875<br>900<br>980<br>1060                | 15,0-17,6<br>12,0-15,4<br>3,2- 8,0<br>0  |                                       |              |                               | 10°                                   | 120<br>200<br>350<br>550 | 6,3-8,0<br>4,9-7,1<br>1,7-3,1<br>0 | 0-160<br>350<br>700<br>980 -<br>1050 | Start<br>2,3-2,8<br>5,4-5,9<br>end |
|                                       |  |  |                                       |              |                               | 3a                                    |                          |                                    |                                      |                                    |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                                    | Rotational-speed ②b<br>limitation<br>intermediate speed | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                                    | Starting fuel delivery<br>Idle switching point ⑥ |                                    | Torque-control ⑤<br>travel |                               |
|---|------------------------------------|---|--|------------------------------------|--|------------------------------------|----------------------------|-------------------------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3  | rev/min<br>4   | cm <sup>3</sup> /1000 strokes<br>5 | rev/min<br>6                                     | cm <sup>3</sup> /1000 strokes<br>7 | rev/min<br>8               | Control rod travel<br>mm<br>9 |
|   |                                    |   |  |                                    |  |                                    |                            |                               |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

Testoil-ISO 4113

**BOSCH**

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# C. Settings for Fuel injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |                  |                             |
|---|------------------|---------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>idle<br>switching point |                  | Low idle speed ⑤ |                             |
| rev/min   | cm³/1000 strokes | rev/min ④a                            | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8                | 9                           |

AC-Nr. 4 320 754

1025 91,0- 93,0 1040 700 99,0-103,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 793

1000 122,0-124,0 1020 700 126,0-130,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 815

900 100,0-106,0 910-920 700 101,0-107,0 100 90,0-130,0 300 19,0-25,0  
600 111,0-117,0

AC-Nr. 4 320 816

900 97,0-103,0 910-920 800 98,0-104,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 817

1100 139,0-143,0 1120 800 149,0-154,0 100 90,0-130,0 375 9,0-19,0  
600 153,0-161,0

AC-Nr. 4 320 829

1100 139,0-143,0 1120 800 149,0-154,0 100 90,0-130,0 375 9,0-19,0  
600 153,0-161,0

AC-Nr. 4 320 933

900 102,0-110,0 1040 800 107,0-116,0 100 90,0-130,0 300 25,0

AC-Nr. 4 320 939

900 98,5 ± 3 1040 700 107,5 ± 4 100 90,0-130,0 300 25,0

AC-Nr. 4 320 940

900 78,0- 86,0 1040 700 100,0-109,0 100 90,0-130,0 300 25,0

AC-Nr. 4 320 941

1025 91,0- 93,0 1040 700 99,0-103,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 942

1000 122,0-124,0 1020 700 126,0-130,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 980

900 108,0-116,0 1120 800 - 100 90,0-130,0 375 9,0-19,0

AC-Nr. 4 320 981

900 111,0-119,0 1020 800 112,0-118,0 100 90,0-130,0 300 25,0

AC-Nr. 4 321 016

750 95,0-101,0 1020 750 95,0-101,0 100 90,0-130,0 300 25,0

AC-Nr. 4 321 064

1000 112,0 1030 800 112,5 100 90,0-130,0 300 25,0

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |   |                               |   |                               |   |   |
|---|-------------------------------|---|---|-------------------------------|---|-------------------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5)<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   |   |
| 1   | 2                             | 3   | 1   | 2                             | 6   | 7                             | 8   | 9 |

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AC-Nr. 4 359 816

|     |             |         |     |             |     |            |     |           |
|-----|-------------|---------|-----|-------------|-----|------------|-----|-----------|
| 900 | 100,0-106,0 | 910-920 | 700 | 101,0-107,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|     |             |         | 600 | 111,0-117,0 |     |            |     |           |

AC-Nr. 4 359 826

|     |            |         |     |            |     |            |     |           |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|
| 900 | 97,0-103,0 | 910-920 | 800 | 98,0-104,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 828

|      |             |      |     |             |     |            |     |          |
|------|-------------|------|-----|-------------|-----|------------|-----|----------|
| 1100 | 139,0-143,0 | 1120 | 800 | 149,0-154,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0 |
|      |             |      | 600 | 153,0-161,0 |     |            |     |          |

AC-Nr. 4 359 830

|      |            |      |     |            |     |            |     |           |
|------|------------|------|-----|------------|-----|------------|-----|-----------|
| 1025 | 91,0- 93,0 | 1040 | 700 | 99,0-103,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|------------|------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 832

|      |             |      |     |             |     |            |     |           |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|
| 1000 | 122,0-124,0 | 1020 | 700 | 126,0-130,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|

AC-Nr. 4 392 693

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 205,0-215,0 | 1065-80 | 900 | 167,0-177,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 695

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 900 | 149,0-155,0 | 920 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

AC-Nr. 4 392 697

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 699

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | £20 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 701

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 703

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-230,0 | 1060-70 | 900 | 200,0-210,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 205,0-215,0 |     |             |     |           |

AC-Nr. 4 392 707

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 243,0-253,0 | 1060-80 | 900 | 222,0-232,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 235,0-245,0 |     |             |     |           |

AC-Nr. 4 392 709

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 392 711

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 600 | 231,0-237,0 | 620 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |   |         |
|---|------------------|---------------------------------------|---|------------------|---|---|---------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>idle<br>switching point | Low idle speed ⑤<br>Control rod<br>travel<br>mm |         |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes                                | rev/min |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7   | 8       |
|   |                  |                                       |   |                  |   |   | 9       |

AC-Nr. 4 392 715

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 392 717

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 719

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 392 721

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

AC-Nr. 4 392 723

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 725

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 727

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 729

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 731

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 392 735

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 392 737

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 392 739

1050 207,0-213,0 1050 900 195,0-201,0 100 130,0-170,0 300 19,0-25,0  
700 225,0-231,0

AC-Nr. 4 392 741

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 392 743

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤ |                          |
|---|------------------|------------------------------------|---|------------------|--|------------------|------------------|--------------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min   | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min          | Control rod<br>travel mm |
| 1   | 2                | 3                                  | 4a  | 5                | 6  | 7                | 8                | 9                        |

AC-Nr. 4 392 747

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 227,0-233,0 | 1070 | 900 | 208,0-214,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 247,0-253,0 |     |             |     |           |

AC-Nr. 4 392 749

|      |             |      |   |   |     |             |     |           |
|------|-------------|------|---|---|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 392 750

|      |             |      |   |   |     |             |     |           |
|------|-------------|------|---|---|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 392 768

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 123,0-133,0 | 820 | 600 | 132,0-142,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 775/776

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 875 | 162,0-164,0 | 890 | 600 | 140,0-144,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 777

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 205,0-207,0 | 970 | 700 | 195,0-199,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 778

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 3 392 779

|      |             |         |      |             |     |             |     |           |
|------|-------------|---------|------|-------------|-----|-------------|-----|-----------|
| 1025 | 190,0-200,0 | 1030-40 | 1000 | 191,0-201,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 900  | 178,0-188,0 |     |             |     |           |

AC-Nr. 4 392 781

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1025 | 228,0-238,0 | 1050-60 | 900 | 205,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 207,0-217,0 |     |             |     |           |

AC-Nr. 4 392 953

|     |             |        |   |   |     |             |     |           |
|-----|-------------|--------|---|---|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 393 095

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-221,0 | 1060-80 | 900 | 210,0-220,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 238,0-248,0 |     |             |     |           |

AC-Nr. 4 393 307

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 210,0-216,0 | 920 | 700 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 393 431

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 393 821

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 242,0-248,0 | 1070 | 900 | 220,0-226,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 230,0-236,0 |     |             |     |           |

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## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b<br>4a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
|---|------------------|--|---|------------------|---|------------------|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min                                  | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3  | 1   | 2                | 6   | 7                | 8                | 9                           |

AC-Nr. 4 393 823

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 393 825

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 827

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 393 829

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 831

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 393 833

1050 264,0 1060-1080 900 280,5 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 835

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

AC-Nr. 4 393 837

1050 227,0-233,0 1070 900 208,0-214,0 100 130,0-170,0 300 19,0-25,0  
700 247,0-253,0

AC-Nr. 4 393 890

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 393 891

955 208,0 965-975 895 203,0 - - - -

AC-Nr. 4 393 961

900 181,0-187,0 920 700 172,0-178,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 001

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 017

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 394 020

700 249,0-257,0 725 600 258,0-264,0 100 130,0-170,0 300 19,0-29,0

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## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|---|---|-------------------------------|---|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3   | 4   | 5                             | 6   | 7                             | 8                  | 9                     |

|                  |             |        |            |                            |     |             |     |           |
|------------------|-------------|--------|------------|----------------------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 062 |             |        |            |                            |     |             |     |           |
| 800              | 113,0-119,0 | 820    | 600        | 102,0-108,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 064 |             |        |            |                            |     |             |     |           |
| 875              | 161,0-165,0 | 890    | 600        | 140,0-144,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 066 |             |        |            |                            |     |             |     |           |
| 800              | 125,0-131,0 | 820    | 600        | 134,0-140,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 068 |             |        |            |                            |     |             |     |           |
| 1025             | 192,0-198,0 | 1045   | 900        | 180,0-186,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 070 |             |        |            |                            |     |             |     |           |
| 1000             | 200,0-206,0 | 1020   | 800<br>600 | 180,0-186,0<br>189,0-195,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 072 |             |        |            |                            |     |             |     |           |
| 940              | 185,0-195,0 | 955-65 | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 074 |             |        |            |                            |     |             |     |           |
| 1025             | 230,0-236,0 | 1040   | 900<br>700 | 207,0-213,0<br>209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 076 |             |        |            |                            |     |             |     |           |
| 1000             | 227,0-233,0 | 1020   | 800        | 197,0-203,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 078 |             |        |            |                            |     |             |     |           |
| 1000             | 235,0-241,0 | 1020   | 700        | 263,0-269,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 080 |             |        |            |                            |     |             |     |           |
| 1000             | 220,0-226,0 | 1020   | 800<br>600 | 209,0-215,0<br>227,0-233,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 082 |             |        |            |                            |     |             |     |           |
| 910              | 190,0       | 930    | -          | -                          | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 084 |             |        |            |                            |     |             |     |           |
| 900              | 160,0-166,0 | 920    | 700        | 139,0-145,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 086 |             |        |            |                            |     |             |     |           |
| 600              | 124,0-130,0 | 620    | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 088 |             |        |            |                            |     |             |     |           |
| 700              | 127,0-133,0 | 720    | 600        | 124,0-130,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 090 |             |        |            |                            |     |             |     |           |
| 800              | 139,0-145,0 | 820    | 600        | 124,0-130,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |   |                  |   |                  |   |   |
|---|------------------|---|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery (2)<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery (6)<br>Idle<br>switching point |                  | Low idle speed (5)<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 1   | 2                | 6   | 7                | 8   | 9 |

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AC-Nr. 4 394 092

925 157,0-163,0 945 800 145,0-151,0 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

AC-Nr. 4 394 094

1000 180,0-186,0 1020 800 154,0-160,0 100 130,0-170,0 300 19,0-25,0  
700 142,0-148,0

AC-Nr. 4 394 096

1050 207,0-213,0 1070 900 161,0-175,0 100 130,0-170,0 300 19,0-25,0  
800 147,0-153,0

AC-Nr. 4 394 098

900 187,0-193,0 920 700 162,0-168,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 100

900 200,0-206,0 920 700 184,0-190,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 102

900 203,0-209,0 920 700 209,0-215,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 104

750 185,0-191,0 770 600 222,0-228,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 106

800 210,0-218,0 820 600 223,0-229,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 108

1050 222,0-228,0 1070 900 202,0-208,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-213,0

AC-Nr. 4 394 110

1000 240,0-246,0 1020 800 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
600 237,0-243,0

AC-Nr. 4 394 112

1050 245,0-251,0 1070 900 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
700 237,0-243,0

AC-Nr. 4 394 114

1000 217,0-223,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 219,0-225,0

AC-Nr. 4 394 116

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 118

1050 269,0-275,0 1070 900 281,0-287,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                       | Breakaway<br>intermediate speed ②b<br>4a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                       | Starting fuel delivery<br>Idle<br>switching point ⑥ |                       | Low idle speed ⑤ |                                  |
|---|-----------------------|--|---|-----------------------|---|-----------------------|------------------|----------------------------------|
| rev/min<br>1  | cm³/1000 strokes<br>2 | rev/min<br>3                             | rev/min<br>1  | cm³/1000 strokes<br>2 | rev/min<br>6  | cm³/1000 strokes<br>7 | rev/min<br>8     | Control rod<br>travel<br>mm<br>9 |

AC-Nr. 4 394 120

1050 234,0-240,0 1070 900 246,0-252,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 122

1050 262,0-268,0 1070 900 279,0-285,0 100 130,0-170,0 300 19,0-25,0  
700 289,0-295,0

AC-Nr. 4 394 124

1050 241,0-247,0 1070 900 265,0-271,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 126

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 128

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 130

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 132

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 134

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 136

1000 255,0-261,0 1020 800 272,0-278,0 100 130,0-170,0 300 19,0-25,0  
600 270,0-276,0

AC-Nr. 4 394 138

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 394 140

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 394 142

900 222,0-228,0 920 700 254,0-260,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 144

1050 257,0-263,0 1070 750 272,0-278,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 148

1050 295,0-303,0 1075 900 309,0-315,0 100 130,0-170,0 300 25,0

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |                                       |   |                               |  |                               |  |    |
|---|-------------------------------|---------------------------------------|---|-------------------------------|--|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                               | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Starting fuel delivery ⑥<br>Idle switching point |                               | Low idle speed ⑤<br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                               | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                | mm |
| 1   | 2                             | 3                                     | 1   | 2                             | 6  | 7                             | 8                                      | 9  |

AC-Nr. 4 394 150

1050 268,0-274,0 1070 900 274,0-280,0 100 130,0-170,0 300 19,0-25,0  
700 280,0-286,0

AC-Nr. 4 394 152

1050 262,0-268,0 1070 900 257,0-273,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-273,0

AC-Nr. 4 394 154

1050 279,0-285,0 1070 900 283,0-289,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

AC-Nr. 4 394 156

1050 296,0-302,0 1070 900 301,0-307,0 100 130,0-170,0 300 19,0-25,0  
700 309,0-315,0

AC-Nr. 4 394 158

" 4 394 157

1050 253,0-256,0 1070 900 252,0-258,0 100 130,0-170,0 300 19,0-25,0  
700 269,0-275,0

AC-Nr. 4 394 160

1050 208,0-214,0 1070 900 230,0-235,0 100 130,0-170,0 300 19,0-25,0  
700 260,0-266,0

AC-Nr. 4 394 162

900 181,0-187,0 920 700 172,0-178,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 164

925 176,0-182,0 945 800 162,0-168,0 100 130,0-170,0 300 19,0-25,0  
700 177,0-183,0

AC-Nr. 4 394 166

900 173,0-179,0 920 800 160,0-166,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 168

925 237,0-243,0 945 800 251,0-257,0 100 130,0-170,0 300 27,0-33,0  
700 269,0-275,0

AC-Nr. 4 394 170

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 176

1050 213,0-219,0 1070 900 212,0-218,0 100 130,0-170,0 300 19,0-25,0  
700 240,0-246,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel mm |   |
|---|------------------|---|--|------------------|--|------------------|---|---|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                     |   |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9 |

AC-Nr. 4 394 246

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |     |           |
|      |             |           | 600 | 255,5-266,0 |     |             |     |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 250

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 257

|     |       |  |  |  |     |             |     |      |
|-----|-------|--|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 314

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 331

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 265,0-271,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 332

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 274,0-280,0 |      |  |  |     |             |     |           |
| 700  | 280,0-286,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 347

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 281,0-287,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 348

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 246,0-252,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 349

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 350

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 279,0-285,0 |      |  |  |     |             |     |           |
| 700  | 289,0-295,0 |      |  |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics<br>high idle speed (5b) (5a) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|--------------------------------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3                                    | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 351

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 352

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 267,0-273,0 |      |  |  |     |             |     |           |
| 700  | 267,0-273,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 353

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 283,0-289,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 354

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 356

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 386

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 390

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 428

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 473

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 |  |  | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |  |  |     |             |     |      |

AC-Nr. 4 394 501

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 521

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 527

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |  |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|---|--|------------------|--|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8                  | 9                     |

AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel mm |   |
|---|------------------|---|--|------------------|--|------------------|---|---|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                     |   |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9 |

AC-Nr. 4 394 740/741

|      |             |           |
|------|-------------|-----------|
| 1020 | 213,0-226,0 | 1030-1040 |
| 915  | 208,0-218,0 |           |

AC-Nr. 4 394 744

|      |       |           |     |             |     |           |
|------|-------|-----------|-----|-------------|-----|-----------|
| 1050 | 250,0 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 256,0 |           |     |             |     |           |

AC-Nr. 4 394 745

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| 750 | 196,0-202,0 |     |     |             |     |           |

AC-Nr. 4 394 746

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 875 | 161,0-165,0 | 890 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 140,0-144,0 |     |     |             |     |           |

AC-Nr. 4 394 771

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 113,0-119,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 102,0-108,0 |     |     |             |     |           |

AC-Nr. 4 394 773

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 125,0-131,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 134,0-140,0 |     |     |             |     |           |

AC-Nr. 4 394 775

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 192,0-198,0 | 1045 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 180,0-186,0 |      |     |             |     |           |

AC-Nr. 4 394 777

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 200,0-206,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 180,0-186,0 |      |     |             |     |           |
| 600  | 189,0-195,0 |      |     |             |     |           |

AC-Nr. 4 394 779

|     |             |        |     |             |     |           |
|-----|-------------|--------|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|-----|-------------|-----|-----------|

AC-Nr. 4 394 781

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 230,0-236,0 | 1040 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 207,0-213,0 |      |     |             |     |           |
| 700  | 209,0-215,0 |      |     |             |     |           |

AC-Nr. 4 394 783

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 227,0-233,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 197,0-203,0 |      |     |             |     |           |

AC-Nr. 4 394 785

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 235,0-241,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700  | 263,0-269,0 |      |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |  |    |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br><br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                      | mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8  | 9  |

AC-Nr. 4 394 787

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1000 | 220,0-226,0 | 1020 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 209,0-215,0 |      |  |     |             |     |           |
| 600  | 227,0-233,0 |      |  |     |             |     |           |

AC-Nr. 4 394 789

|     |       |     |  |     |             |     |      |
|-----|-------|-----|--|-----|-------------|-----|------|
| 910 | 190,0 | 930 |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------|-----|--|-----|-------------|-----|------|

AC-Nr. 4 394 791

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 160,0-166,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 139,0-145,0 |     |  |     |             |     |           |

AC-Nr. 4 394 793

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 600 | 124,0-130,0 | 620 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 795

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 700 | 127,0-133,0 | 720 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |     |             |     |           |

AC-Nr. 4 394 797

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 800 | 139,0-145,0 | 820 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |     |             |     |           |

AC-Nr. 4 394 799

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 157,0-163,0 | 945 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 145,0-151,0 |     |  |     |             |     |           |
| 600 | 134,0-140,0 |     |  |     |             |     |           |

AC-Nr. 4 394 801

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 154,0-160,0 |      |  |     |             |     |           |
| 700  | 142,0-148,0 |      |  |     |             |     |           |

AC-Nr. 4 394 803

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 161,0-175,0 |      |  |     |             |     |           |
| 800  | 147,0-153,0 |      |  |     |             |     |           |

AC-Nr. 4 394 805

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 162,0-168,0 |     |  |     |             |     |           |

AC-Nr. 4 394 807

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 184,0-190,0 |     |  |     |             |     |           |

AC-Nr. 4 394 809

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 209,0-215,0 |     |  |     |             |     |           |



# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel mm |   |
|---|------------------|---|--|------------------|--|------------------|---|---|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                     |   |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9 |

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AC-Nr. 4 394 811

750 185,0-191,0  
600 222,0-228,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0  
600 223,0-229,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0  
900 202,0-208,0  
700 207,0-213,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 817

1000 240,0-246,0  
800 224,0-230,0  
600 237,0-243,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 819

1050 245,0-251,0  
900 224,0-230,0  
700 237,0-243,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 821

1000 217,0-223,0  
800 197,0-203,0  
600 219,0-225,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 823

900 210,0-216,0  
700 212,0-218,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0  
900 281,0-287,0  
700 293,0-299,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 827

1050 234,0-240,0  
900 246,0-252,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 829

1050 262,0-268,0  
900 279,0-285,0  
700 289,0-295,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 831

1050 241,0-247,0  
900 265,0-271,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |  |    |
|---|------------------|---|--|------------------|--|------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                  | mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8  | 9  |

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AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel mm |   |
|---|------------------|---|--|------------------|--|------------------|---|---|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                     |   |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9 |

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AC-Nr. 4 394 861

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |     |             |     |           |

AC-Nr. 4 394 863

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |     |             |     |           |

AC-Nr. 4 394 865

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |     |             |     |           |

AC-Nr. 4 394 867

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 172,0-178,0 |     |  |     |             |     |           |

AC-Nr. 4 394 869

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 162,0-168,0 |     |  |     |             |     |           |
| 700 | 177,0-183,0 |     |  |     |             |     |           |

AC-Nr. 4 394 871

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 160,0-166,0 |     |  |     |             |     |           |

AC-Nr. 4 394 873

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 800 | 251,0-257,0 |     |  |     |             |     |           |
| 700 | 269,0-275,0 |     |  |     |             |     |           |

AC-Nr. 4 394 875

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 600 | 240,0-246,0 |     |  |     |             |     |           |

AC-Nr. 4 394 877

|      |             |           |  |     |             |     |           |
|------|-------------|-----------|--|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1060-1080 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 212,0-218,0 |           |  |     |             |     |           |
| 700  | 240,0-246,0 |           |  |     |             |     |           |

AC-Nr. 4 394 879

|      |             |           |     |             |     |             |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |           |
|      |             |           | 600 | 255,5-266,0 |     |             |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |  |   |                  |   |                  |   |   |
|---|------------------|--|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a)<br>rev/min | Fuel delivery characteristics (5a)<br>high idle speed (5b)<br>rev/min |                  | Starting fuel delivery<br>idle switching point (6)<br>rev/min |                  | Low idle speed (5)<br>Control rod travel mm |   |
| rev/min   | cm³/1000 strokes | rev/min  | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min                                     |   |
| 1   | 2                | 3  | 4   | 5                | 6   | 7                | 8   | 9 |

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AC-Nr. 4 394 881

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |     |             |     |           |

AC-Nr. 4 394 883

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 885

|     |       |  |     |             |     |      |
|-----|-------|--|-----|-------------|-----|------|
| 600 | 258,0 |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|-----|-------------|-----|------|

AC-Nr. 4 394 891

|     |             |     |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|-----|-------------|-----|------|

AC-Nr. 4 394 893

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |     |             |     |           |

AC-Nr. 4 394 895

|      |             |      |     |             |     |      |
|------|-------------|------|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |     |             |     |      |

AC-Nr. 4 394 897

|     |             |     |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |     |             |     |      |

AC-Nr. 4 394 899

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |     |             |     |           |

AC-Nr. 4 394 905

|      |             |      |     |             |     |      |
|------|-------------|------|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |     |             |     |      |

AC-Nr. 4 394 907

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |     |             |     |           |

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1050 | 202,0-210,5 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 911

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1000 | 230,5-239,5 | 1010-1030 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 915

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1000 | 203,0-211,5 | 1010-1030 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br>Control rod travel mm |   |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|---|---|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                     |   |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8   | 9 |

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AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

# Test Specifications Fuel Injection Pumps ① and Governors

En

PE 6 P 120 A 420 LS 152

RQV 300...950 PA 112 KR

supersedes

0 401 846 223

company Allis-Chalmers

1 - 5 - 3 - 6 - 2 - 4

engine 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8-2,9(2,75-2,95)mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1000                             | 12                            | 26,4 - 27,1  |   |                               | 1,0  |  |
| 200                              | 6                             | 4,2 - 5,2  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

| Upper rated speed                     |                                      |  | Intermediate rated speed              |         |                       | Lower rated speed                     |                          |                                    | Sliding sleeve travel                              |   |
|---------------------------------------|--------------------------------------|--|---------------------------------------|---------|-----------------------|---------------------------------------|--------------------------|------------------------------------|--|---|
| Degree of deflection of control lever | rev/min<br>Control rod travel mm     | Control rod travel mm<br>rev/min                 | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min                  | Control rod travel mm              | rev/min  | mm  |
| 1                                     | 2                                    | 3  | 4                                     | 5       | 6                     | 7                                     | 8                        | 9                                  | 10   | 11  |
| 66°                                   | 1050<br>1100<br>1150<br>1210<br>1300 | 15,0-18,0<br>10,7-15,0<br>6,0-11,6<br>0-7,0<br>0 |                                       |         |                       | 10°                                   | 250<br>350<br>450<br>550 | 6,4-8,0<br>3,0-5,2<br>1,3-2,8<br>0 | 180-<br>260<br>400<br>550<br>1000<br>1200-<br>1290 | Start<br>1,8-2,7<br>3,8-4,2<br>7,5-7,9<br>End |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Rotational-speed limitation<br>intermediate speed | Fuel delivery characteristics<br>high idle speed |                               | Starting fuel delivery<br>Idle switching point |                               | Torque-control travel |                       |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|-----------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min               | Control rod travel mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                     | 9                     |
|   |                               |   |  |                               |  |                               |                       |                       |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |   |                               |   |                               |   |   |
|---|-------------------------------|---|---|-------------------------------|---|-------------------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>Idle<br>switching point (6) |                               | Low idle speed (5)<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   |   |
| 1   | 2                             | 3   | 1   | 2                             | 6   | 7                             | 8   | 9 |

|                  |             |         |            |                            |     |            |     |           |
|------------------|-------------|---------|------------|----------------------------|-----|------------|-----|-----------|
| AC-Nr. 4 320 754 |             |         |            |                            |     |            |     |           |
| 1025             | 91,0- 93,0  | 1040    | 700        | 99,0-103,0                 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 793 |             |         |            |                            |     |            |     |           |
| 1000             | 122,0-124,0 | 1020    | 700        | 126,0-130,0                | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 815 |             |         |            |                            |     |            |     |           |
| 900              | 100,0-106,0 | 910-920 | 700<br>600 | 101,0-107,0<br>111,0-117,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 816 |             |         |            |                            |     |            |     |           |
| 900              | 97,0-103,0  | 910-920 | 800        | 98,0-104,0                 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 817 |             |         |            |                            |     |            |     |           |
| 1100             | 139,0-143,0 | 1120    | 800<br>600 | 149,0-154,0<br>153,0-161,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0  |
| AC-Nr. 4 320 829 |             |         |            |                            |     |            |     |           |
| 1100             | 139,0-143,0 | 1120    | 800<br>600 | 149,0-154,0<br>153,0-161,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0  |
| AC-Nr. 4 320 933 |             |         |            |                            |     |            |     |           |
| 900              | 102,0-110,0 | 1040    | 800        | 107,0-116,0                | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 320 939 |             |         |            |                            |     |            |     |           |
| 900              | 98,5 ± 3    | 1040    | 700        | 107,5 ± 4                  | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 320 940 |             |         |            |                            |     |            |     |           |
| 900              | 78,0- 86,0  | 1040    | 700        | 100,0-109,0                | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 320 941 |             |         |            |                            |     |            |     |           |
| 1025             | 91,0- 93,0  | 1040    | 700        | 99,0-103,0                 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 942 |             |         |            |                            |     |            |     |           |
| 1000             | 122,0-124,0 | 1020    | 700        | 126,0-130,0                | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 980 |             |         |            |                            |     |            |     |           |
| 900              | 108,0-116,0 | 1120    | 800        | -                          | 100 | 90,0-130,0 | 375 | 9,0-19,0  |
| AC-Nr. 4 320 981 |             |         |            |                            |     |            |     |           |
| 900              | 111,0-119,0 | 1020    | 800        | 112,0-118,0                | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 321 016 |             |         |            |                            |     |            |     |           |
| 750              | 95,0-101,0  | 1020    | 750        | 95,0-101,0                 | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 321 064 |             |         |            |                            |     |            |     |           |
| 1000             | 112,0       | 1030    | 800        | 112,5                      | 100 | 90,0-130,0 | 300 | 25,0      |

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |   |   |
|---|------------------|---------------------------------------|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>idle<br>switching point |                  | Low idle speed ⑤<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8   | 9 |

-3-

AC-Nr. 4 359 816

|     |             |         |     |             |     |            |     |           |
|-----|-------------|---------|-----|-------------|-----|------------|-----|-----------|
| 900 | 100,0-106,0 | 910-920 | 700 | 101,0-107,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|     |             |         | 600 | 111,0-117,0 |     |            |     |           |

AC-Nr. 4 359 826

|     |            |         |     |            |     |            |     |           |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|
| 900 | 97,0-103,0 | 910-920 | 800 | 98,0-104,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 828

|      |             |      |     |             |     |            |     |          |
|------|-------------|------|-----|-------------|-----|------------|-----|----------|
| 1100 | 139,0-143,0 | 1120 | 800 | 149,0-154,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0 |
|      |             |      | 600 | 153,0-161,0 |     |            |     |          |

AC-Nr. 4 359 830

|      |            |      |     |            |     |            |     |           |
|------|------------|------|-----|------------|-----|------------|-----|-----------|
| 1025 | 91,0- 93,0 | 1040 | 700 | 99,0-103,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|------------|------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 832

|      |             |      |     |             |     |            |     |           |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|
| 1000 | 122,0-124,0 | 1020 | 700 | 126,0-130,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|

AC-Nr. 4 392 693

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 205,0-215,0 | 1065-80 | 900 | 167,0-177,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 695

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 900 | 149,0-155,0 | 920 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

AC-Nr. 4 392 697

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 699

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 701

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 703

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-230,0 | 1060-70 | 900 | 200,0-210,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 205,0-215,0 |     |             |     |           |

AC-Nr. 4 392 707

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 243,0-253,0 | 1060-80 | 900 | 222,0-232,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 235,0-245,0 |     |             |     |           |

AC-Nr. 4 392 709

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 392 711

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 600 | 231,0-237,0 | 620 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

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## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>Idle<br>switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|---|---|-------------------------------|---|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3   | 1   | 2                             | 6   | 7                             | 8                  | 9                     |

AC-Nr. 4 392 715

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 392 717

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 719

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 392 721

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

AC-Nr. 4 392 723

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 725

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 727

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 729

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 731

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 392 735

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 392 737

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 392 739

1050 207,0-213,0 1050 900 195,0-201,0 100 130,0-170,0 300 19,0-25,0  
700 225,0-231,0

AC-Nr. 4 392 741

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 392 743

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                       |
|---|------------------|------------------------------------|---|------------------|---|------------------|------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3                                  | 4a  | 5                | 6   | 7                | 8                | 9                     |

AC-Nr. 4 392 747

1050 227,0-233,0 1070 900 208,0-214,0 100 130,0-170,0 300 19,0-25,0  
700 247,0-253,0

AC-Nr. 4 392 749

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 750

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 768

800 123,0-133,0 820 600 132,0-142,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 775/776

875 162,0-164,0 890 600 140,0-144,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 777

950 205,0-207,0 970 700 195,0-199,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 778

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 3 392 779

1025 190,0-200,0 1030-40 1000 191,0-201,0 100 130,0-170,0 300 19,0-25,0  
900 178,0-188,0

AC-Nr. 4 392 781

1025 228,0-238,0 1050-60 900 205,0-215,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-217,0

AC-Nr. 4 392 953

940 185,0-195,0 955-65 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 095

1050 211,0-221,0 1060-80 900 210,0-220,0 100 130,0-170,0 300 19,0-25,0  
700 238,0-248,0

AC-Nr. 4 393 307

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 393 431

1050 208,0-214,0 1070 900 230,0-235,0 100 130,0-170,0 300 19,0-25,0  
700 260,0-266,0

AC-Nr. 4 393 821

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed<br>rev/min (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>life<br>switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|--|---|-------------------------------|---|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3  | 4   | 5                             | 6   | 7                             | 8                  | 9                     |

AC-Nr. 4 393 823

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 393 825

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 827

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 393 829

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 831

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 393 833

1050 204,0 1060-1080 900 280,5 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 835

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

AC-Nr. 4 393 837

1050 227,0-233,0 1070 900 208,0-214,0 100 130,0-170,0 300 19,0-25,0  
700 247,0-253,0

AC-Nr. 4 393 890

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 393 891

955 208,0 965-975 895 203,0 - - - -

AC-Nr. 4 393 961

900 181,0-187,0 920 700 172,0-178,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 001

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 017

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 394 020

700 249,0-257,0 725 600 258,0-264,0 100 130,0-170,0 300 19,0-29,0

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |  |                  |                  |                       |
|---|------------------|---------------------------------------|---|------------------|--|------------------|------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤ |                       |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3                                     | 1   | 2                | 6  | 7                | 8                | 9                     |

|                  |             |        |     |             |     |             |     |           |
|------------------|-------------|--------|-----|-------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 062 |             |        |     |             |     |             |     |           |
| 800              | 113,0-119,0 | 820    | 600 | 102,0-108,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 064 |             |        |     |             |     |             |     |           |
| 875              | 161,0-165,0 | 890    | 600 | 140,0-144,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 066 |             |        |     |             |     |             |     |           |
| 800              | 125,0-131,0 | 820    | 600 | 134,0-140,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 068 |             |        |     |             |     |             |     |           |
| 1025             | 192,0-198,0 | 1045   | 900 | 180,0-186,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 070 |             |        |     |             |     |             |     |           |
| 1000             | 200,0-206,0 | 1020   | 800 | 180,0-186,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                  |             |        | 600 | 189,0-195,0 |     |             |     |           |
| AC-Nr. 4 394 072 |             |        |     |             |     |             |     |           |
| 940              | 185,0-195,0 | 955-65 | -   | -           | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 074 |             |        |     |             |     |             |     |           |
| 1025             | 230,0-236,0 | 1040   | 900 | 207,0-213,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                  |             |        | 700 | 209,0-215,0 |     |             |     |           |
| AC-Nr. 4 394 076 |             |        |     |             |     |             |     |           |
| 1000             | 227,0-233,0 | 1020   | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 078 |             |        |     |             |     |             |     |           |
| 1000             | 235,0-241,0 | 1020   | 700 | 263,0-269,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 080 |             |        |     |             |     |             |     |           |
| 1000             | 220,0-226,0 | 1020   | 800 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|                  |             |        | 600 | 227,0-233,0 |     |             |     |           |
| AC-Nr. 4 394 082 |             |        |     |             |     |             |     |           |
| 910              | 190,0       | 930    | -   | -           | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 084 |             |        |     |             |     |             |     |           |
| 900              | 160,0-166,0 | 920    | 700 | 139,0-145,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 086 |             |        |     |             |     |             |     |           |
| 600              | 124,0-130,0 | 620    | -   | -           | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 088 |             |        |     |             |     |             |     |           |
| 700              | 127,0-133,0 | 720    | 600 | 124,0-130,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 090 |             |        |     |             |     |             |     |           |
| 800              | 139,0-145,0 | 820    | 600 | 124,0-130,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
|---|------------------|------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                  | 4a  | 5                | 6   | 7                | 8                | 9                           |

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AC-Nr. 4 394 092

925 157,0-163,0 945 800 145,0-151,0 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

AC-Nr. 4 394 094

1000 180,0-186,0 1020 800 154,0-160,0 100 130,0-170,0 300 19,0-25,0  
700 142,0-148,0

AC-Nr. 4 394 096

1050 207,0-213,0 1070 900 161,0-175,0 100 130,0-170,0 300 19,0-25,0  
800 147,0-153,0

AC-Nr. 4 394 098

900 187,0-193,0 920 700 162,0-168,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 100

900 200,0-206,0 920 700 184,0-190,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 102

900 203,0-209,0 920 700 209,0-215,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 104

750 185,0-191,0 770 600 222,0-228,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 106

800 210,0-218,0 820 600 223,0-229,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 108

1050 222,0-228,0 1070 900 202,0-208,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-213,0

AC-Nr. 4 394 110

1000 240,0-246,0 1020 800 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
600 237,0-243,0

AC-Nr. 4 394 112

1050 245,0-251,0 1070 900 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
700 237,0-243,0

AC-Nr. 4 394 114

1000 217,0-223,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 219,0-225,0

AC-Nr. 4 394 116

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 118

1050 269,0-275,0 1070 900 281,0-287,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |   |                  |   |                  |   |   |
|---|------------------|---|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery (2)<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery (6)<br>idle<br>switching point |                  | Low idle speed (5)<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 1   | 2                | 6   | 7                | 8   | 9 |

AC-Nr. 4 394 120

1050 234,0-240,0 1070 900 246,0-252,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 122

1050 262,0-268,0 1070 900 279,0-285,0 100 130,0-170,0 300 19,0-25,0  
700 289,0-295,0

AC-Nr. 4 394 124

1050 241,0-247,0 1070 900 265,0-271,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 126

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 128

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 130

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 132

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 134

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 136

1000 255,0-261,0 1020 800 272,0-278,0 100 130,0-170,0 300 19,0-25,0  
600 270,0-276,0

AC-Nr. 4 394 138

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 394 140

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 394 142

900 222,0-228,0 920 700 254,0-260,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 144

1050 257,0-263,0 1070 750 272,0-278,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 148

1050 295,0-303,0 1075 900 309,0-315,0 100 130,0-170,0 300 25,0

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## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Starting fuel delivery<br>Idle<br>switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|---|---|------------------|---|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3   | 1   | 2                | 6   | 7                | 8                  | 9                     |

AC-Nr. 4 394 150

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 | 900 | 274,0-280,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 280,0-286,0 |     |             |     |           |

AC-Nr. 4 394 152

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 267,0-273,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 267,0-273,0 |     |             |     |           |

AC-Nr. 4 394 154

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 | 900 | 283,0-289,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

AC-Nr. 4 394 156

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 | 900 | 301,0-307,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 309,0-315,0 |     |             |     |           |

AC-Nr. 4 394 158

" 4 394 157

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 | 900 | 252,0-258,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 160

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 394 162

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 164

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 | 800 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|     |             |     | 700 | 177,0-183,0 |     |             |     |           |

AC-Nr. 4 394 166

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 | 800 | 160,0-166,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 168

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 | 800 | 251,0-257,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|     |             |     | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 170

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 176

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1070 | 900 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 240,0-246,0 |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|--------------------------------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3                                    | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 246

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |     |           |
|      |             |           | 600 | 255,5-266,0 |     |             |     |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 250

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 257

|     |       |  |  |  |     |             |     |      |
|-----|-------|--|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 314

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 331

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 265,0-271,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 332

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 274,0-280,0 |      |  |  |     |             |     |           |
| 700  | 280,0-286,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 347

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 281,0-287,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 348

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 246,0-252,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 349

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 350

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 279,0-285,0 |      |  |  |     |             |     |           |
| 700  | 289,0-295,0 |      |  |  |     |             |     |           |



# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |  |    |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery (6)<br>Idle switching point |                               | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                  | mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8  | 9  |

AC-Nr. 4 394 351

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 352

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 267,0-273,0 |      |  |  |     |             |     |           |
| 700  | 267,0-273,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 353

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 283,0-289,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 354

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 356

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 386

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 390

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 428

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 473

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 |  |  | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |  |  |     |             |     |      |

AC-Nr. 4 394 501

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 521

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 527

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |  |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |  |    |
|---|------------------|---|--|------------------|--|------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5h) |                  | Starting fuel delivery (6)<br>idle switching point |                  | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                  | mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8  | 9  |

AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |   |   |
|---|------------------|---|--|------------------|--|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                     |   |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9 |

AC-Nr. 4 394 740/741

|      |             |           |
|------|-------------|-----------|
| 1020 | 213,0-226,0 | 1030-1040 |
| 915  | 208,0-218,0 |           |

AC-Nr. 4 394 744

|      |       |           |     |             |     |           |
|------|-------|-----------|-----|-------------|-----|-----------|
| 1050 | 250,0 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 256,0 |           |     |             |     |           |

AC-Nr. 4 394 745

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| 750 | 196,0-202,0 |     |     |             |     |           |

AC-Nr. 4 394 746

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 875 | 161,0-165,0 | 890 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 140,0-144,0 |     |     |             |     |           |

AC-Nr. 4 394 771

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 113,0-119,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 102,0-108,0 |     |     |             |     |           |

AC-Nr. 4 394 773

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 125,0-131,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 134,0-140,0 |     |     |             |     |           |

AC-Nr. 4 394 775

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 192,0-198,0 | 1045 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 180,0-186,0 |      |     |             |     |           |

AC-Nr. 4 394 777

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 200,0-206,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 180,0-186,0 |      |     |             |     |           |
| 600  | 189,0-195,0 |      |     |             |     |           |

AC-Nr. 4 394 779

|     |             |        |     |             |     |           |
|-----|-------------|--------|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|-----|-------------|-----|-----------|

AC-Nr. 4 394 781

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 230,0-236,0 | 1040 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 207,0-213,0 |      |     |             |     |           |
| 700  | 209,0-215,0 |      |     |             |     |           |

AC-Nr. 4 394 783

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 227,0-233,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 197,0-203,0 |      |     |             |     |           |

AC-Nr. 4 394 785

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 235,0-241,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700  | 263,0-269,0 |      |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|--------------------------------------|--|------------------|--|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                              | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3                                    | 4  | 5                | 6  | 7                | 8                  | 9                     |

AC-Nr. 4 394 787

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1000 | 220,0-226,0 | 1020 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 209,0-215,0 |      |  |     |             |     |           |
| 600  | 227,0-233,0 |      |  |     |             |     |           |

AC-Nr. 4 394 789

|     |       |     |  |     |             |     |      |
|-----|-------|-----|--|-----|-------------|-----|------|
| 910 | 190,0 | 930 |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------|-----|--|-----|-------------|-----|------|

AC-Nr. 4 394 791

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 160,0-166,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 139,0-145,0 |     |  |     |             |     |           |

AC-Nr. 4 394 793

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 600 | 124,0-130,0 | 620 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 795

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 700 | 127,0-133,0 | 720 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |     |             |     |           |

AC-Nr. 4 394 797

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 800 | 139,0-145,0 | 820 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |     |             |     |           |

AC-Nr. 4 394 799

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 157,0-163,0 | 945 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 145,0-151,0 |     |  |     |             |     |           |
| 600 | 134,0-140,0 |     |  |     |             |     |           |

AC-Nr. 4 394 801

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 154,0-160,0 |      |  |     |             |     |           |
| 700  | 142,0-148,0 |      |  |     |             |     |           |

AC-Nr. 4 394 803

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 161,0-175,0 |      |  |     |             |     |           |
| 800  | 147,0-153,0 |      |  |     |             |     |           |

AC-Nr. 4 394 805

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 162,0-168,0 |     |  |     |             |     |           |

AC-Nr. 4 394 807

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 184,0-190,0 |     |  |     |             |     |           |

AC-Nr. 4 394 809

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 209,0-215,0 |     |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |  |   |                  |  |                  |   |   |
|---|------------------|--|---|------------------|--|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a)<br>rev/min | Fuel delivery characteristics (5a)<br>high idle speed (5b)<br>rev/min |                  | Starting fuel delivery (6)<br>idle<br>switching point<br>rev/min |                  | Low idle speed (5)<br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min  | rev/min   | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3  | 4   | 5                | 6  | 7                | 8   | 9 |

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AC-Nr. 4 394 811

750 185,0-191,0  
600 222,0-228,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0  
600 223,0-229,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0  
900 202,0-208,0  
700 207,0-213,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 817

1000 240,0-246,0  
800 224,0-230,0  
600 237,0-243,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 819

1050 245,0-251,0  
900 224,0-230,0  
700 237,0-243,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 821

1000 217,0-223,0  
800 197,0-203,0  
600 219,0-225,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 823

900 210,0-216,0  
700 212,0-218,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0  
900 281,0-287,0  
700 293,0-299,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 827

1050 234,0-240,0  
900 246,0-252,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 829

1050 262,0-268,0  
900 279,0-285,0  
700 289,0-295,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 831

1050 241,0-247,0  
900 265,0-271,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

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H8

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |                    |                       |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

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## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |  |    |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                  | mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8  | 9  |
|   |                               |   |  |                               |  |                               |  |    |

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AC-Nr. 4 394 861

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |     |             |     |           |

AC-Nr. 4 394 863

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |     |             |     |           |

AC-Nr. 4 394 865

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |     |             |     |           |

AC-Nr. 4 394 867

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 172,0-178,0 |     |  |     |             |     |           |

AC-Nr. 4 394 869

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 162,0-168,0 |     |  |     |             |     |           |
| 700 | 177,0-183,0 |     |  |     |             |     |           |

AC-Nr. 4 394 871

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 160,0-166,0 |     |  |     |             |     |           |

AC-Nr. 4 394 873

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 800 | 251,0-257,0 |     |  |     |             |     |           |
| 700 | 269,0-275,0 |     |  |     |             |     |           |

AC-Nr. 4 394 875

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 600 | 240,0-246,0 |     |  |     |             |     |           |

AC-Nr. 4 394 877

|      |             |           |  |     |             |     |           |
|------|-------------|-----------|--|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1060-1080 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 212,0-218,0 |           |  |     |             |     |           |
| 700  | 240,0-246,0 |           |  |     |             |     |           |

AC-Nr. 4 394 879

|      |             |           |     |             |     |             |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |           |
|      |             |           | 600 | 255,5-266,0 |     |             |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|---|--|------------------|--|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8                  | 9                     |

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AC-Nr. 4 394 881

700 246,0 720  
600 263,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 883

1050 244,5-254,5 1060-1080

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 885

600 258,0

100 130,0-170,0 300 27,0

AC-Nr. 4 394 891

600 167,0-175,0 620

100 130,0-170,0 300 25,0

AC-Nr. 4 394 893

900 259,0-267,0 925  
700 238,0-246,0

100 130,0-170,0 300 19,0-29,0

AC-Nr. 4 394 895

1000 188,0-196,0 1025  
800 180,0-187,0

100 130,0-170,0 300 25,0

AC-Nr. 4 394 897

850 189,0-197,0 875  
750 185,0-193,0

100 130,0-170,0 325 30,0

AC-Nr. 4 394 899

900 175,0 925  
700 158,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 905

1000 239,0-247,0 1025  
700 229,0-235,0

100 130,0-170,0 300 25,0

AC-Nr. 4 394 907

900 161,0 925  
800 151,0

100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

1050 202,0-210,5 1060-1080

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 911

1000 230,5-239,5 1010-1030

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 915

1000 203,0-211,5 1010-1030

100 130,0-170,0 300 19,0-25,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |   |                  |   |   |
|---|------------------|---|--|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle<br>switching point (6) |                  | Low idle speed (5)<br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 4  | 5                | 6   | 7                | 8   | 9 |

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AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

①

# Test Specifications Fuel Injection Pumps ① and Governors

40

WPP 001/4 ALD 16,0 c

En

PE 6 P 120/420 LS 152

RQV 300...800 PA 175 KR

supersedes

0 401 846 242 ; 0 401 846 243

company Allis-Chalmers

1 - 5 - 3 - 6 - 2 - 4

engine 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1000                             | 12                            | 26,4 - 27,1  |   |                               | 1,0  |  |
| 600                              | 6                             | 8,6 - 9,8  |   |                               |  |  |
|                                  | 12                            | 26,3 - 28,2  |   |                               |  |  |
|                                  | 15                            | 33,8 - 36,2  |   |                               |  |  |
| 200                              | 6                             | 4,2 - 5,2  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

| Upper rated speed                          |  |  | Intermediate rated speed                   |              |                               | Lower rated speed                          |                          |                                    | Sliding sleeve travel |          |
|--|--|--|--|--------------|-------------------------------|--|--------------------------|------------------------------------|-----------------------|----------|
| Degree of deflection of control lever<br>1 | rev/min<br>Control rod travel<br>mm<br>2 | Control rod travel<br>mm<br>rev/min<br>3 | Degree of deflection of control lever<br>4 | rev/min<br>5 | Control rod travel<br>mm<br>6 | Degree of deflection of control lever<br>7 | rev/min<br>8             | Control rod travel<br>mm<br>9      | rev/min<br>10         | mm<br>11 |
| 66°  | 875<br>900<br>980<br>1060                | 15,0-17,6<br>12,9-15,4<br>3,2- 8,0<br>0  |  |              |                               | 10°  | 120<br>200<br>350<br>550 | 6,3-8,0<br>4,9-7,1<br>1,7-3,1<br>0 |                       |          |
|  |  |  |  |              |                               | (3a)                                       |                          |                                    |                       |          |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                                    | Rotational-speed limitation<br>intermediate speed ②b<br>④a | Fuel delivery characteristics<br>high idle speed ⑤b<br>⑤a |                                    | Starting fuel delivery<br>idle switching point ⑥ |                                    | Torque-control travel ⑤ |                               |
|---|------------------------------------|--|---|------------------------------------|--|------------------------------------|-------------------------|-------------------------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3   | rev/min<br>4  | cm <sup>3</sup> /1000 strokes<br>5 | rev/min<br>6                                     | cm <sup>3</sup> /1000 strokes<br>7 | rev/min<br>8            | Control rod travel<br>mm<br>9 |
|   |                                    |  |   |                                    |  |                                    |                         |                               |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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9.90

H<sub>2</sub> 13

H13

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|---|---|-------------------------------|---|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3   | 1   | 2                             | 6   | 7                             | 8                  | 9                     |

AC-Nr. 4 320 754

1025 91,0- 93,0 1040 700 99,0-103,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 793

1000 122,0-124,0 1020 700 126,0-130,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 815

900 100,0-106,0 910-920 700 101,0-107,0 100 90,0-130,0 300 19,0-25,0  
600 111,0-117,0

AC-Nr. 4 320 816

900 97,0-103,0 910-920 800 98,0-104,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 817

1100 139,0-143,0 1120 800 149,0-154,0 100 90,0-130,0 375 9,0-19,0  
600 153,0-161,0

AC-Nr. 4 320 829

1100 139,0-143,0 1120 800 149,0-154,0 100 90,0-130,0 375 9,0-19,0  
600 153,0-161,0

AC-Nr. 4 320 933

900 102,0-110,0 1040 800 107,0-116,0 100 90,0-130,0 300 25,0

AC-Nr. 4 320 939

900 98,5 ± 3 1040 700 107,5 ± 4 100 90,0-130,0 300 25,0

AC-Nr. 4 320 940

900 78,0- 86,0 1040 700 100,0-109,0 100 90,0-130,0 300 25,0

AC-Nr. 4 320 941

1025 91,0- 93,0 1040 700 99,0-103,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 942

1000 122,0-124,0 1020 700 126,0-130,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 980

900 108,0-116,0 1120 800 - 100 90,0-130,0 375 9,0-19,0

AC-Nr. 4 320 981

900 111,0-119,0 1020 800 112,0-118,0 100 90,0-130,0 300 25,0

AC-Nr. 4 321 016

750 95,0-101,0 1020 750 95,0-101,0 100 90,0-130,0 300 25,0

AC-Nr. 4 321 064

1000 112,0 1030 800 112,5 100 90,0-130,0 300 25,0

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |   |                               |   |                               |   |   |
|---|-------------------------------|---|---|-------------------------------|---|-------------------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5)<br>Control rod travel mm |   |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                     |   |
| 1   | 2                             | 3   | 1   | 2                             | 6   | 7                             | 8   | 9 |

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AC-Nr. 4 359 816

|     |             |         |     |             |     |            |     |           |
|-----|-------------|---------|-----|-------------|-----|------------|-----|-----------|
| 900 | 100,0-106,0 | 910-920 | 700 | 101,0-107,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|     |             |         | 600 | 111,0-117,0 |     |            |     |           |

AC-Nr. 4 359 826

|     |            |         |     |            |     |            |     |           |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|
| 900 | 97,0-103,0 | 910-920 | 800 | 98,0-104,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 828

|      |             |      |     |             |     |            |     |          |
|------|-------------|------|-----|-------------|-----|------------|-----|----------|
| 1100 | 139,0-143,0 | 1120 | 800 | 149,0-154,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0 |
|      |             |      | 600 | 153,0-161,0 |     |            |     |          |

AC-Nr. 4 359 830

|      |            |      |     |            |     |            |     |           |
|------|------------|------|-----|------------|-----|------------|-----|-----------|
| 1025 | 91,0- 93,0 | 1040 | 700 | 99,0-103,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|------------|------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 832

|      |             |      |     |             |     |            |     |           |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|
| 1000 | 122,0-124,0 | 1020 | 700 | 126,0-130,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|

AC-Nr. 4 392 693

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 205,0-215,0 | 1065-80 | 900 | 167,0-177,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 695

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 900 | 149,0-155,0 | 920 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

AC-Nr. 4 392 697

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 699

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 701

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 703

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-230,0 | 1060-70 | 900 | 200,0-210,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 205,0-215,0 |     |             |     |           |

AC-Nr. 4 392 707

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 243,0-253,0 | 1060-80 | 900 | 222,0-232,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 235,0-245,0 |     |             |     |           |

AC-Nr. 4 392 709

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 392 711

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 600 | 231,0-237,0 | 620 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |   |                  |   |                  |   |   |
|---|------------------|---|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Starting fuel delivery<br>Idle<br>switching point (6) |                  | Low idle speed (5)<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 1   | 2                | 6   | 7                | 8   | 9 |

AC-Nr. 4 392 715

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 392 717

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 719

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 392 721

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

AC-Nr. 4 392 723

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 725

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 727

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 729

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 731

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 392 735

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 392 737

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 392 739

1050 207,0-213,0 1050 900 195,0-201,0 100 130,0-170,0 300 19,0-25,0  
700 225,0-231,0

AC-Nr. 4 392 741

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 392 743

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |   |                  |  |                  |  |    |
|---|------------------|---|---|------------------|--|------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery (2)<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery (6)<br>Idle switching point |                  | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                  | mm |
| 1   | 2                | 3   | 1   | 2                | 6  | 7                | 8  | 9  |

AC-Nr. 4 392 747

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 227,0-233,0 | 1070 | 900 | 208,0-214,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 247,0-253,0 |     |             |     |           |

AC-Nr. 4 392 749

|      |             |      |   |   |     |             |     |           |
|------|-------------|------|---|---|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 392 750

|      |             |      |   |   |     |             |     |           |
|------|-------------|------|---|---|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 392 768

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 123,0-133,0 | 820 | 600 | 132,0-142,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 775/776

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 875 | 162,0-164,0 | 890 | 600 | 140,0-144,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 777

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 205,0-207,0 | 970 | 700 | 195,0-199,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 778

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 3 392 779

|      |             |         |      |             |     |             |     |           |
|------|-------------|---------|------|-------------|-----|-------------|-----|-----------|
| 1025 | 190,0-200,0 | 1030-40 | 1000 | 191,0-201,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 900  | 178,0-188,0 |     |             |     |           |

AC-Nr. 4 392 781

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1025 | 228,0-238,0 | 1050-60 | 900 | 205,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 207,0-217,0 |     |             |     |           |

AC-Nr. 4 392 953

|     |             |        |   |   |     |             |     |           |
|-----|-------------|--------|---|---|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 393 095

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-221,0 | 1060-80 | 900 | 210,0-220,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 238,0-248,0 |     |             |     |           |

AC-Nr. 4 393 307

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 210,0-216,0 | 920 | 700 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 393 431

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 393 821

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 242,0-248,0 | 1070 | 900 | 220,0-226,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 230,0-236,0 |     |             |     |           |

### C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b<br>4a | Full-load delivery<br>Control rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
|---|------------------|--|---|------------------|---|------------------|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min                                  | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3  | 1   | 2                | 6   | 7                | 8                | 9                           |

AC-Nr. 4 393 823

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 187,0-193,0 | 1070 | 900 | 174,0-180,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 175,0-181,0 |     |             |     |           |

AC-Nr. 4 393 825

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 224,0-230,0 | 1070 | 800 | 185,0-191,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 393 827

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 200,0-206,0 | 1070 | 900 | 190,0-196,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 214,0-220,0 |     |             |     |           |

AC-Nr. 4 393 829

|      |             |      |   |   |     |             |     |           |
|------|-------------|------|---|---|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 393 831

|      |             |      |     |             |     |             |   |   |
|------|-------------|------|-----|-------------|-----|-------------|---|---|
| 1050 | 213,0-219,0 | 1070 | 900 | 202,0-208,0 | 100 | 130,0-170,0 | - | - |
|      |             |      | 700 | 230,0-236,0 |     |             |   |   |

AC-Nr. 4 393 833

|      |       |           |     |       |     |             |     |           |
|------|-------|-----------|-----|-------|-----|-------------|-----|-----------|
| 1050 | 264,0 | 1060-1080 | 900 | 280,5 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------|-----------|-----|-------|-----|-------------|-----|-----------|

AC-Nr. 4 393 835

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-226,0 | 1070 | 900 | 210,0-216,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 243,0-249,0 |     |             |     |           |

AC-Nr. 4 393 837

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 227,0-233,0 | 1070 | 900 | 208,0-214,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 247,0-253,0 |     |             |     |           |

AC-Nr. 4 393 890

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 393 891

|     |       |         |     |       |   |   |   |   |
|-----|-------|---------|-----|-------|---|---|---|---|
| 955 | 208,0 | 965-975 | 895 | 203,0 | - | - | - | - |
|-----|-------|---------|-----|-------|---|---|---|---|

AC-Nr. 4 393 961

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 001

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 017

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 020

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 249,0-257,0 | 725 | 600 | 258,0-264,0 | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                       |
|---|------------------|---------------------------------------|---|------------------|---|------------------|------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8                | 9                     |

|                  |      |             |        |            |                            |     |             |     |           |
|------------------|------|-------------|--------|------------|----------------------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 062 | 800  | 113,0-119,0 | 820    | 600        | 102,0-108,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 064 | 875  | 161,0-165,0 | 890    | 600        | 140,0-144,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 066 | 800  | 125,0-131,0 | 820    | 600        | 134,0-140,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 068 | 1025 | 192,0-198,0 | 1045   | 900        | 180,0-186,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 070 | 1000 | 200,0-206,0 | 1020   | 800<br>600 | 180,0-186,0<br>189,0-195,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 072 | 940  | 185,0-195,0 | 955-65 | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 074 | 1025 | 230,0-236,0 | 1040   | 900<br>700 | 207,0-213,0<br>209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 076 | 1000 | 227,0-233,0 | 1020   | 800        | 197,0-203,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 078 | 1000 | 235,0-241,0 | 1020   | 700        | 263,0-269,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 080 | 1000 | 220,0-226,0 | 1020   | 800<br>600 | 209,0-215,0<br>227,0-233,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 082 | 910  | 190,0       | 930    | -          | -                          | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 084 | 900  | 160,0-166,0 | 920    | 700        | 139,0-145,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 086 | 600  | 124,0-130,0 | 620    | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 088 | 700  | 127,0-133,0 | 720    | 600        | 124,0-130,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 090 | 800  | 139,0-145,0 | 820    | 600        | 124,0-130,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                               | Breakaway<br>intermediate speed ②④ | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                               | Starting fuel delivery<br>idle<br>switching point ⑥ |                               | Low idle speed ⑤ |                             |
|---|-------------------------------|------------------------------------|---|-------------------------------|---|-------------------------------|------------------|-----------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                            | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                             | 3                                  | 1   | 2                             | 6   | 7                             | 8                | 9                           |

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AC-Nr. 4 394 092

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 157,0-163,0 | 945 | 800 | 145,0-151,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|     |             |     | 600 | 134,0-140,0 |     |             |     |           |

AC-Nr. 4 394 094

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 | 800 | 154,0-160,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 142,0-148,0 |     |             |     |           |

AC-Nr. 4 394 096

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 | 900 | 161,0-175,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 800 | 147,0-153,0 |     |             |     |           |

AC-Nr. 4 394 098

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 | 700 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 100

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 | 700 | 184,0-190,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 102

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 104

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 106

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 108

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 222,0-228,0 | 1070 | 900 | 202,0-208,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 207,0-213,0 |     |             |     |           |

AC-Nr. 4 394 110

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 240,0-246,0 | 1020 | 800 | 224,0-230,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 237,0-243,0 |     |             |     |           |

AC-Nr. 4 394 112

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 245,0-251,0 | 1070 | 900 | 224,0-230,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 237,0-243,0 |     |             |     |           |

AC-Nr. 4 394 114

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 394 116

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 210,0-216,0 | 920 | 700 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 118

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 | 900 | 281,0-287,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

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## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>Idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|---|---|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3   | 1   | 2                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 120

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 | 900 | 246,0-252,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 268,0-274,0 |     |             |     |           |

AC-Nr. 4 394 122

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 279,0-285,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 289,0-295,0 |     |             |     |           |

AC-Nr. 4 394 124

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 | 900 | 265,0-271,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 268,0-274,0 |     |             |     |           |

AC-Nr. 4 394 126

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 232,0-238,0 | 920 | 700 | 253,0-259,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 128

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 244,0-250,0 | 770 | 700 | 253,0-259,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 130

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 239,0-245,0 | 820 | 600 | 248,0-254,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 132

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 212,0-218,0 | 1020 | 800 | 230,0-236,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 134

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 288,0-294,0 | 920 | 700 | 287,0-293,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 136

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 255,0-261,0 | 1020 | 800 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 270,0-276,0 |     |             |     |           |

AC-Nr. 4 394 138

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 239,0-245,0 | 1070 | 900 | 233,0-239,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 273,0-279,0 |     |             |     |           |

AC-Nr. 4 394 140

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 215,0-221,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 220,0-226,0 |     |             |     |           |

AC-Nr. 4 394 142

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 222,0-228,0 | 920 | 700 | 254,0-260,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 144

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 257,0-263,0 | 1070 | 750 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 148

|      |             |      |     |             |     |             |     |      |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|
| 1050 | 295,0-303,0 | 1075 | 900 | 309,0-315,0 | 100 | 130,0-170,0 | 300 | 25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |                  |                             |
|---|------------------|---------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>Idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8                | 9                           |

AC-Nr. 4 394 150

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 | 900 | 274,0-280,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 280,0-286,0 |     |             |     |           |

AC-Nr. 4 394 152

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 267,0-273,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 267,0-273,0 |     |             |     |           |

AC-Nr. 4 394 154

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 | 900 | 283,0-289,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

AC-Nr. 4 394 156

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 | 900 | 301,0-307,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 309,0-315,0 |     |             |     |           |

AC-Nr. 4 394 158

" 4 394 157

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 | 900 | 252,0-258,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 160

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 394 162

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 164

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 | 800 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|     |             |     | 700 | 177,0-183,0 |     |             |     |           |

AC-Nr. 4 394 166

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 | 800 | 160,0-166,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 168

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 | 800 | 251,0-257,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|     |             |     | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 170

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 176

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1070 | 900 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 240,0-246,0 |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|--------------------------------------|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3                                    | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 246

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |     |           |
|      |             |           | 600 | 255,5-266,0 |     |             |     |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 250

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 257

|     |       |  |  |  |     |             |     |      |
|-----|-------|--|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 314

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 331

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 265,0-271,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 332

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 274,0-280,0 |      |  |  |     |             |     |           |
| 700  | 280,0-286,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 347

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 281,0-287,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 348

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 246,0-252,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 349

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 350

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 279,0-285,0 |      |  |  |     |             |     |           |
| 700  | 289,0-295,0 |      |  |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |   |   |
|---|------------------|---|--|------------------|--|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br><br>Control rod travel mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9 |

AC-Nr. 4 394 351

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 352

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 267,0-273,0 |      |  |  |     |             |     |           |
| 700  | 267,0-273,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 353

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 283,0-289,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 354

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 356

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 386

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 390

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 428

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 473

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 |  |  | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |  |  |     |             |     |      |

AC-Nr. 4 394 501

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 521

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 527

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |  |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel mm |    |
|---|------------------|---|--|------------------|--|------------------|---|----|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                     | mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9  |

AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |   | Breakaway<br>intermediate speed (2b)<br>rev/min (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b)<br>rev/min (4) cm³/1000 strokes (5) |   | Starting fuel delivery<br>idle switching point (6)<br>rev/min (6) cm³/1000 strokes (7) |   | Low idle speed (5)<br>rev/min (8) Control rod travel mm (9) |   |
|---|---|--|--|---|--|---|---|---|
| 1   | 2 | 3  | 4  | 5 | 6  | 7 | 8   | 9 |

AC-Nr. 4 394 740/741

|      |             |           |
|------|-------------|-----------|
| 1020 | 213,0-226,0 | 1030-1040 |
| 915  | 208,0-218,0 |           |

AC-Nr. 4 394 744

|      |       |           |     |             |     |           |
|------|-------|-----------|-----|-------------|-----|-----------|
| 1050 | 250,0 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 256,0 |           |     |             |     |           |

AC-Nr. 4 394 745

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| 750 | 196,0-202,0 |     |     |             |     |           |

AC-Nr. 4 394 746

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 875 | 161,0-165,0 | 890 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 140,0-144,0 |     |     |             |     |           |

AC-Nr. 4 394 771

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 113,0-119,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 102,0-108,0 |     |     |             |     |           |

AC-Nr. 4 394 773

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 125,0-131,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 134,0-140,0 |     |     |             |     |           |

AC-Nr. 4 394 775

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 192,0-198,0 | 1045 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 180,0-186,0 |      |     |             |     |           |

AC-Nr. 4 394 777

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 200,0-206,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 180,0-186,0 |      |     |             |     |           |
| 600  | 189,0-195,0 |      |     |             |     |           |

AC-Nr. 4 394 779

|     |             |        |     |             |     |           |
|-----|-------------|--------|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|-----|-------------|-----|-----------|

AC-Nr. 4 394 781

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 230,0-236,0 | 1040 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 207,0-213,0 |      |     |             |     |           |
| 700  | 209,0-215,0 |      |     |             |     |           |

AC-Nr. 4 394 783

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 227,0-233,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 197,0-203,0 |      |     |             |     |           |

AC-Nr. 4 394 785

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 235,0-241,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700  | 263,0-269,0 |      |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |   | Breakaway<br>intermediate speed (2b)<br>rev/min (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b)<br>rev/min (4a) cm³/1000 strokes |   | Starting fuel delivery<br>idle switching point (6)<br>rev/min cm³/1000 strokes |   | Low idle speed (5)<br>rev/min Control rod travel mm |   |
|---|---|--|---|---|--|---|---|---|
| 1   | 2 | 3  | 4   | 5 | 6  | 7 | 8   | 9 |

AC-Nr. 4 394 787

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1000 | 220,0-226,0 | 1020 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 209,0-215,0 |      |  |  |     |             |     |           |
| 600  | 227,0-233,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 789

|     |       |     |  |  |     |             |     |      |
|-----|-------|-----|--|--|-----|-------------|-----|------|
| 910 | 190,0 | 930 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 791

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 160,0-166,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 139,0-145,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 793

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 600 | 124,0-130,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 795

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 127,0-133,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 797

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 800 | 139,0-145,0 | 820 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 799

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 925 | 157,0-163,0 | 945 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 145,0-151,0 |     |  |  |     |             |     |           |
| 600 | 134,0-140,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 801

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 154,0-160,0 |      |  |  |     |             |     |           |
| 700  | 142,0-148,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 803

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 161,0-175,0 |      |  |  |     |             |     |           |
| 800  | 147,0-153,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 805

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 162,0-168,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 807

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 184,0-190,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 809

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 209,0-215,0 |     |  |  |     |             |     |           |



# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|--------------------------------------|---|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3                                    | 4   | 5                             | 6  | 7                             | 8                  | 9                     |

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AC-Nr. 4 394 811

750 185,0-191,0  
600 222,0-228,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0  
600 223,0-229,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0  
900 202,0-208,0  
700 207,0-213,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 817

1000 240,0-246,0  
800 224,0-230,0  
600 237,0-243,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 819

1050 245,0-251,0  
900 224,0-230,0  
700 237,0-243,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 821

1000 217,0-223,0  
800 197,0-203,0  
600 219,0-225,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 823

900 210,0-216,0  
700 212,0-218,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0  
900 281,0-287,0  
700 293,0-299,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 827

1050 234,0-240,0  
900 246,0-252,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 829

1050 262,0-268,0  
900 279,0-285,0  
700 289,0-295,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 831

1050 241,0-247,0  
900 265,0-271,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |                                      |   |                               |   |                               |                    |                             |
|---|-------------------------------|--------------------------------------|---|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5) |                             |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min (4a)                         | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3                                    | 4   | 5                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 394 833

900 232,0-238,0 920  
700 253,0-259,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0 770  
700 253,0-259,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0 820  
600 248,0-254,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0 1020  
800 230,0-236,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0 920  
700 287,0-293,0

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0 1020  
800 272,0-278,0  
600 270,0-276,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0 1070  
900 233,0-239,0  
700 273,0-279,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0 1020  
800 197,0-203,0  
600 220,0-226,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0 920  
700 254,0-260,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0 1070  
750 272,0-278,0

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0 1075  
900 309,0-315,0

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0 1070  
900 267,0-273,0  
700 267,0-273,0

100 130,0-170,0 300 19,0-25,0

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## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |                    |                       |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery (6)<br>idle switching point |                               | Low idle speed (5) |                       |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

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AC-Nr. 4 394 861

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |     |             |     |           |

AC-Nr. 4 394 863

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |     |             |     |           |

AC-Nr. 4 394 865

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |     |             |     |           |

AC-Nr. 4 394 867

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 172,0-178,0 |     |  |     |             |     |           |

AC-Nr. 4 394 869

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 162,0-168,0 |     |  |     |             |     |           |
| 700 | 177,0-183,0 |     |  |     |             |     |           |

AC-Nr. 4 394 871

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 160,0-166,0 |     |  |     |             |     |           |

AC-Nr. 4 394 873

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 800 | 251,0-257,0 |     |  |     |             |     |           |
| 700 | 269,0-275,0 |     |  |     |             |     |           |

AC-Nr. 4 394 875

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 600 | 240,0-246,0 |     |  |     |             |     |           |

AC-Nr. 4 394 877

|      |             |           |  |     |             |     |           |
|------|-------------|-----------|--|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1060-1080 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 212,0-218,0 |           |  |     |             |     |           |
| 700  | 240,0-246,0 |           |  |     |             |     |           |

AC-Nr. 4 394 879

|      |             |           |     |             |     |             |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |           |
|      |             |           | 600 | 255,5-266,0 |     |             |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

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## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |  |   |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br>Control rod travel<br>mm |   |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  |   |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8  | 9 |

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AC-Nr. 4 394 881

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |     |             |     |           |

AC-Nr. 4 394 883

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 885

|     |       |  |     |             |     |      |
|-----|-------|--|-----|-------------|-----|------|
| 600 | 258,0 |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|-----|-------------|-----|------|

AC-Nr. 4 394 891

|     |             |     |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|-----|-------------|-----|------|

AC-Nr. 4 394 893

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |     |             |     |           |

AC-Nr. 4 394 895

|      |             |      |     |             |     |      |
|------|-------------|------|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |     |             |     |      |

AC-Nr. 4 394 897

|     |             |     |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |     |             |     |      |

AC-Nr. 4 394 899

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |     |             |     |           |

AC-Nr. 4 394 905

|      |             |      |     |             |     |      |
|------|-------------|------|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |     |             |     |      |

AC-Nr. 4 394 907

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |     |             |     |           |

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1050 | 202,0-210,5 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 911

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1000 | 230,5-239,5 | 1010-1030 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 915

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1000 | 203,0-211,5 | 1010-1030 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

**Testoil-ISO 4113**

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |                    |                             |
|---|------------------|---|--|------------------|--|------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                             |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8                  | 9                           |
|   |                  |   |  |                  |  |                  |                    |                             |

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AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.

Adjust stop part position to obtain mean curve above.

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 ALO 16,0 d

En

PE 6 P 120 A 420 LS 245

RQV 300...1050 PA 154 KR

supersedes

0 401 846 269

company Allis-Chalmers

1 - 5 - 3 - 6 - 2 - 4

engine 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1000                             | 12                            | 26,4 - 27,1  |   |                               | 1,0  |  |
| 600                              | 6                             | 8,6 - 9,8  |   |                               |  |  |
|                                  | 12                            | 26,3 - 28,1  |   |                               |  |  |
|                                  | 15                            | 33,8 - 36,1  |   |                               |  |  |
| 200                              | 6                             | 4,2 - 5,2  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

| Upper rated speed                          |                                       |   | Intermediate rated speed                   |              |                            | Lower rated speed                          |                          |                                    | Sliding sleeve travel |          |
|--|---------------------------------------|---|--|--------------|----------------------------|--|--------------------------|------------------------------------|-----------------------|----------|
| Degree of deflection of control lever<br>1 | rev/min<br>Control rod travel mm<br>2 | Control rod travel mm<br>rev/min<br>3             | Degree of deflection of control lever<br>4 | rev/min<br>5 | Control rod travel mm<br>6 | Degree of deflection of control lever<br>7 | rev/min<br>8             | Control rod travel mm<br>9         | rev/min<br>10         | mm<br>11 |
| 66°  | 1050<br>1100<br>1150<br>1210<br>1300  | 15,0-18,0<br>10,7-15,0<br>6,0-11,6<br>0- 7,0<br>0 |  |              |                            | 10°  | 250<br>350<br>450<br>550 | 6,4-8,0<br>3,0-5,2<br>1,3-2,8<br>0 |                       |          |
|  |                                       |   |  |              |                            | 3a   |                          |                                    |                       |          |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                                    | Rotational-speed limitation<br>intermediate speed (2b)<br>(4a) | Fuel delivery characteristics<br>high idle speed (5b)<br>(5a) |                                    | Starting fuel delivery<br>idle switching point (6) |                                    | Torque-control travel<br>(5) |                               |
|---|------------------------------------|--|---|------------------------------------|--|------------------------------------|------------------------------|-------------------------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3   | rev/min<br>4  | cm <sup>3</sup> /1000 strokes<br>5 | rev/min<br>6                                       | cm <sup>3</sup> /1000 strokes<br>7 | rev/min<br>8                 | Control rod travel<br>mm<br>9 |
|   |                                    |  |   |                                    |  |                                    |                              |                               |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                                    | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                                    | Starting fuel delivery<br>idle<br>switching point ⑥ |                                    | Low idle speed ⑤ |                                  |
|---|------------------------------------|------------------------------------|---|------------------------------------|---|------------------------------------|------------------|----------------------------------|
| rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>3                       | rev/min<br>1  | cm <sup>3</sup> /1000 strokes<br>2 | rev/min<br>6  | cm <sup>3</sup> /1000 strokes<br>7 | rev/min<br>8     | Control rod<br>travel<br>mm<br>9 |

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|                  |             |         |            |                            |     |            |     |           |
|------------------|-------------|---------|------------|----------------------------|-----|------------|-----|-----------|
| AC-Nr. 4 320 754 |             |         |            |                            |     |            |     |           |
| 1025             | 91,0- 93,0  | 1040    | 700        | 99,0-103,0                 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 793 |             |         |            |                            |     |            |     |           |
| 1000             | 122,0-124,0 | 1020    | 700        | 126,0-130,0                | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 815 |             |         |            |                            |     |            |     |           |
| 900              | 100,0-106,0 | 910-920 | 700<br>600 | 101,0-107,0<br>111,0-117,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 816 |             |         |            |                            |     |            |     |           |
| 900              | 97,0-103,0  | 910-920 | 800        | 98,0-104,0                 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 817 |             |         |            |                            |     |            |     |           |
| 1100             | 139,0-143,0 | 1120    | 800<br>600 | 149,0-154,0<br>153,0-161,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0  |
| AC-Nr. 4 320 829 |             |         |            |                            |     |            |     |           |
| 1100             | 139,0-143,0 | 1120    | 800<br>600 | 149,0-154,0<br>153,0-161,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0  |
| AC-Nr. 4 320 933 |             |         |            |                            |     |            |     |           |
| 900              | 102,0-110,0 | 1040    | 800        | 107,0-116,0                | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 320 939 |             |         |            |                            |     |            |     |           |
| 900              | 98,5 ± 3    | 1040    | 700        | 107,5 ± 4                  | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 320 940 |             |         |            |                            |     |            |     |           |
| 900              | 78,0- 86,0  | 1040    | 700        | 100,0-109,0                | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 320 941 |             |         |            |                            |     |            |     |           |
| 1025             | 91,0- 93,0  | 1040    | 700        | 99,0-103,0                 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 942 |             |         |            |                            |     |            |     |           |
| 1000             | 122,0-124,0 | 1020    | 700        | 126,0-130,0                | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 980 |             |         |            |                            |     |            |     |           |
| 900              | 108,0-116,0 | 1120    | 800        | -                          | 100 | 90,0-130,0 | 375 | 9,0-19,0  |
| AC-Nr. 4 320 981 |             |         |            |                            |     |            |     |           |
| 900              | 111,0-119,0 | 1020    | 800        | 112,0-118,0                | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 321 016 |             |         |            |                            |     |            |     |           |
| 750              | 95,0-101,0  | 1020    | 750        | 95,0-101,0                 | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 321 064 |             |         |            |                            |     |            |     |           |
| 1000             | 112,0       | 1030    | 800        | 112,5                      | 100 | 90,0-130,0 | 300 | 25,0      |

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |                                       |   |                               |   |                               |                  |                       |
|---|-------------------------------|---------------------------------------|---|-------------------------------|---|-------------------------------|------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                               | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                               | Starting fuel delivery<br>idle<br>switching point ⑥ |                               | Low idle speed ⑤ |                       |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                               | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                             | 3                                     | 1   | 2                             | 6   | 7                             | 8                | 9                     |

AC-Nr. 4 359 816

|     |             |         |     |             |     |            |     |           |
|-----|-------------|---------|-----|-------------|-----|------------|-----|-----------|
| 900 | 100,0-106,0 | 910-920 | 700 | 101,0-107,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|     |             |         | 600 | 111,0-117,0 |     |            |     |           |

AC-Nr. 4 359 826

|     |            |         |     |            |     |            |     |           |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|
| 900 | 97,0-103,0 | 910-920 | 800 | 98,0-104,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 828

|      |             |      |     |             |     |            |     |          |
|------|-------------|------|-----|-------------|-----|------------|-----|----------|
| 1100 | 139,0-143,0 | 1120 | 800 | 149,0-154,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0 |
|      |             |      | 600 | 153,0-161,0 |     |            |     |          |

AC-Nr. 4 359 830

|      |            |      |     |            |     |            |     |           |
|------|------------|------|-----|------------|-----|------------|-----|-----------|
| 1025 | 91,0- 93,0 | 1040 | 700 | 99,0-103,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|------------|------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 832

|      |             |      |     |             |     |            |     |           |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|
| 1000 | 122,0-124,0 | 1020 | 700 | 126,0-130,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|

AC-Nr. 4 392 693

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 205,0-215,0 | 1065-80 | 900 | 167,0-177,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 695

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 900 | 149,0-155,0 | 920 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

AC-Nr. 4 392 697

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 699

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 701

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 703

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-230,0 | 1060-70 | 900 | 200,0-210,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 205,0-215,0 |     |             |     |           |

AC-Nr. 4 392 707

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 243,0-253,0 | 1060-80 | 900 | 222,0-232,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 235,0-245,0 |     |             |     |           |

AC-Nr. 4 392 709

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 392 711

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 600 | 231,0-237,0 | 620 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|



## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b<br>④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>Idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
|---|------------------|--|---|------------------|---|------------------|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min                                  | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3  | 1   | 2                | 6   | 7                | 8                | 9                           |

AC-Nr. 4 392 715

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 392 717

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 719

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 392 721

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

AC-Nr. 4 392 723

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 725

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 727

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 729

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 731

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 392 735

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 392 737

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 392 739

1050 207,0-213,0 1050 900 195,0-201,0 100 130,0-170,0 300 19,0-25,0  
700 225,0-231,0

AC-Nr. 4 392 741

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 392 743

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
|---|------------------|------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                  | 1   | 2                | 6   | 7                | 8                | 9                           |

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AC-Nr. 4 392 747

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 227,0-233,0 | 1070 | 900 | 208,0-214,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 247,0-253,0 |     |             |     |           |

AC-Nr. 4 392 749

|      |             |      |   |   |     |             |     |           |
|------|-------------|------|---|---|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 392 750

|      |             |      |   |   |     |             |     |           |
|------|-------------|------|---|---|-----|-------------|-----|-----------|
| 1050 | 230,0-234,0 | 1070 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 392 768

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 123,0-133,0 | 820 | 600 | 132,0-142,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 775/776

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 875 | 162,0-164,0 | 890 | 600 | 140,0-144,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 777

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 205,0-207,0 | 970 | 700 | 195,0-199,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 778

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 750 | 196,0-202,0 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 3 392 779

|      |             |         |      |             |     |             |     |           |
|------|-------------|---------|------|-------------|-----|-------------|-----|-----------|
| 1025 | 190,0-200,0 | 1030-40 | 1000 | 191,0-201,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 900  | 178,0-188,0 |     |             |     |           |

AC-Nr. 4 392 781

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1025 | 228,0-238,0 | 1050-60 | 900 | 205,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 207,0-217,0 |     |             |     |           |

AC-Nr. 4 392 953

|     |             |        |   |   |     |             |     |           |
|-----|-------------|--------|---|---|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | - | - | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|---|---|-----|-------------|-----|-----------|

AC-Nr. 4 393 095

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-221,0 | 1060-80 | 900 | 210,0-220,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 238,0-248,0 |     |             |     |           |

AC-Nr. 4 393 307

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 210,0-216,0 | 920 | 700 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 393 431

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 393 821

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 242,0-248,0 | 1070 | 900 | 220,0-226,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 230,0-236,0 |     |             |     |           |

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## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |   |   |
|---|------------------|---------------------------------------|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>idle<br>switching point |                  | Low idle speed ⑤<br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3                                     | 4   | 5                | 6   | 7                | 8   | 9 |

|                  |             |           |            |                            |     |             |     |           |
|------------------|-------------|-----------|------------|----------------------------|-----|-------------|-----|-----------|
| AC-Nr. 4 393 823 |             |           |            |                            |     |             |     |           |
| 1050             | 187,0-193,0 | 1070      | 900<br>700 | 174,0-180,0<br>175,0-181,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 393 825 |             |           |            |                            |     |             |     |           |
| 1050             | 224,0-230,0 | 1070      | 800        | 185,0-191,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 393 827 |             |           |            |                            |     |             |     |           |
| 1050             | 200,0-206,0 | 1070      | 900<br>700 | 190,0-196,0<br>214,0-220,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 393 829 |             |           |            |                            |     |             |     |           |
| 1050             | 230,0-234,0 | 1070      | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 393 831 |             |           |            |                            |     |             |     |           |
| 1050             | 213,0-219,0 | 1070      | 900<br>700 | 202,0-208,0<br>230,0-236,0 | 100 | 130,0-170,0 | -   | -         |
| AC-Nr. 4 393 833 |             |           |            |                            |     |             |     |           |
| 1050             | 264,0       | 1060-1080 | 900        | 280,5                      | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 393 835 |             |           |            |                            |     |             |     |           |
| 1050             | 220,0-226,0 | 1070      | 900<br>700 | 210,0-216,0<br>243,0-249,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 393 837 |             |           |            |                            |     |             |     |           |
| 1050             | 227,0-233,0 | 1070      | 900<br>700 | 208,0-214,0<br>247,0-253,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 393 890 |             |           |            |                            |     |             |     |           |
| 950              | 208,0-214,0 | 990       | 750        | 196,0-202,0                | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| AC-Nr. 4 393 891 |             |           |            |                            |     |             |     |           |
| 955              | 208,0       | 965-975   | 895        | 203,0                      | -   | -           | -   | -         |
| AC-Nr. 4 393 961 |             |           |            |                            |     |             |     |           |
| 900              | 181,0-187,0 | 920       | 700        | 172,0-178,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 001 |             |           |            |                            |     |             |     |           |
| 700              | 218,0-224,0 | 720       | 600        | 240,0-246,0                | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| AC-Nr. 4 394 017 |             |           |            |                            |     |             |     |           |
| 950              | 208,0-214,0 | 990       | 750        | 196,0-202,0                | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| AC-Nr. 4 394 020 |             |           |            |                            |     |             |     |           |
| 700              | 249,0-257,0 | 725       | 600        | 258,0-264,0                | 100 | 130,0-170,0 | 300 | 19,0-29,0 |

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |   |                  |   |                  |   |   |
|---|------------------|---|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Starting fuel delivery<br>idle<br>switching point (6) |                  | Low idle speed (5)<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 1   | 2                | 6   | 7                | 8   | 9 |

|                  |      |             |        |            |                            |     |             |     |           |
|------------------|------|-------------|--------|------------|----------------------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 062 | 800  | 113,0-119,0 | 820    | 600        | 102,0-108,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 064 | 875  | 161,0-165,0 | 890    | 600        | 140,0-144,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 066 | 800  | 125,0-131,0 | 820    | 600        | 134,0-140,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 068 | 1025 | 192,0-198,0 | 1045   | 900        | 180,0-186,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 070 | 1000 | 200,0-206,0 | 1020   | 800<br>600 | 180,0-186,0<br>189,0-195,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 072 | 940  | 185,0-195,0 | 955-65 | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 074 | 1025 | 230,0-236,0 | 1040   | 900<br>700 | 207,0-213,0<br>209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 076 | 1000 | 227,0-233,0 | 1020   | 800        | 197,0-203,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 078 | 1000 | 235,0-241,0 | 1020   | 700        | 263,0-269,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 080 | 1000 | 220,0-226,0 | 1020   | 800<br>600 | 209,0-215,0<br>227,0-233,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 082 | 910  | 190,0       | 930    | -          | -                          | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 084 | 900  | 160,0-166,0 | 920    | 700        | 139,0-145,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 086 | 600  | 124,0-130,0 | 620    | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 088 | 700  | 127,0-133,0 | 720    | 600        | 124,0-130,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 090 | 800  | 139,0-145,0 | 820    | 600        | 124,0-130,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |  |   |                               |   |                               |  |    |
|---|-------------------------------|--|---|-------------------------------|---|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a)<br>rev/min | Full-load delivery (2)<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Starting fuel delivery (6)<br>idle<br>switching point |                               | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                  | mm |
| 1   | 2                             | 3  | 1   | 2                             | 6   | 7                             | 8  | 9  |

AC-Nr. 4 394 092

925 157,0-163,0 945 800 145,0-151,0 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

AC-Nr. 4 394 094

1000 180,0-186,0 1020 800 154,0-160,0 100 130,0-170,0 300 19,0-25,0  
700 142,0-148,0

AC-Nr. 4 394 096

1050 207,0-213,0 1070 900 161,0-175,0 100 130,0-170,0 300 19,0-25,0  
800 147,0-153,0

AC-Nr. 4 394 098

900 187,0-193,0 920 700 162,0-168,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 100

900 200,0-206,0 920 700 184,0-190,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 102

900 203,0-209,0 920 700 209,0-215,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 104

750 185,0-191,0 770 600 222,0-228,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 106

800 210,0-218,0 820 600 223,0-229,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 108

1050 222,0-228,0 1070 900 202,0-208,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-213,0

AC-Nr. 4 394 110

1000 240,0-246,0 1020 800 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
600 237,0-243,0

AC-Nr. 4 394 112

1050 245,0-251,0 1070 900 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
700 237,0-243,0

AC-Nr. 4 394 114

1000 217,0-223,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 219,0-225,0

AC-Nr. 4 394 116

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 118

1050 269,0-275,0 1070 900 281,0-287,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

**Testoil-ISO 4113**

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |                  |                             |
|---|------------------|---------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8                | 9                           |

AC-Nr. 4 394 120

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 | 900 | 246,0-252,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 268,0-274,0 |     |             |     |           |

AC-Nr. 4 394 122

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 279,0-285,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 289,0-295,0 |     |             |     |           |

AC-Nr. 4 394 124

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 | 900 | 265,0-271,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 268,0-274,0 |     |             |     |           |

AC-Nr. 4 394 126

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 232,0-238,0 | 920 | 700 | 253,0-259,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 128

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 244,0-250,0 | 770 | 700 | 253,0-259,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 130

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 239,0-245,0 | 820 | 600 | 248,0-254,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 132

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 212,0-218,0 | 1020 | 800 | 230,0-236,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 134

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 288,0-294,0 | 920 | 700 | 287,0-293,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 136

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 255,0-261,0 | 1020 | 800 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 270,0-276,0 |     |             |     |           |

AC-Nr. 4 394 138

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 239,0-245,0 | 1070 | 900 | 233,0-239,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 273,0-279,0 |     |             |     |           |

AC-Nr. 4 394 140

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 215,0-221,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 220,0-226,0 |     |             |     |           |

AC-Nr. 4 394 142

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 222,0-228,0 | 920 | 700 | 254,0-260,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 144

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 257,0-263,0 | 1070 | 750 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 148

|      |             |      |     |             |     |             |     |      |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|
| 1050 | 295,0-303,0 | 1075 | 900 | 309,0-315,0 | 100 | 130,0-170,0 | 300 | 25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Starting fuel delivery<br>idle<br>switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|---|---|------------------|---|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3   | 1   | 2                | 6   | 7                | 8                  | 9                     |

AC-Nr. 4 394 150

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 | 900 | 274,0-280,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 280,0-286,0 |     |             |     |           |

AC-Nr. 4 394 152

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 267,0-273,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 267,0-273,0 |     |             |     |           |

AC-Nr. 4 394 154

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 | 900 | 283,0-289,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

AC-Nr. 4 394 156

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 | 900 | 301,0-307,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 309,0-315,0 |     |             |     |           |

AC-Nr. 4 394 158

" 4 394 157

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 | 900 | 252,0-258,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 160

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 394 162

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 164

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 | 800 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|     |             |     | 700 | 177,0-183,0 |     |             |     |           |

AC-Nr. 4 394 166

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 | 800 | 160,0-166,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 168

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 | 800 | 251,0-257,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|     |             |     | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 170

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 176

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1070 | 900 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 240,0-246,0 |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway<br>intermediate speed (2b) | Fuel delivery characteristics<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|--------------------------------------|---|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                              | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3                                    | 4   | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 246

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |     |           |
|      |             |           | 600 | 255,5-266,0 |     |             |     |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 250

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 257

|     |       |  |  |  |     |             |     |      |
|-----|-------|--|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 314

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 331

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 265,0-271,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 332

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 274,0-280,0 |      |  |  |     |             |     |           |
| 700  | 280,0-286,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 347

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 281,0-287,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 348

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 246,0-252,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 349

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 350

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 279,0-285,0 |      |  |  |     |             |     |           |
| 700  | 289,0-295,0 |      |  |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|--------------------------------------|--|------------------|--|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                              | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3                                    | 4  | 5                | 6  | 7                | 8                  | 9                     |

AC-Nr. 4 394 351

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 352

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 267,0-273,0 |      |  |  |     |             |     |           |
| 700  | 267,0-273,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 353

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 283,0-289,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 354

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 356

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 386

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 390

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 428

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 473

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 |  |  | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |  |  |     |             |     |      |

AC-Nr. 4 394 501

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 521

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 527

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |  |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                       | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                       | Starting fuel delivery<br>idle switching point (6) |                       | Low idle speed (5) |                            |
|---|-----------------------|---|--|-----------------------|--|-----------------------|--------------------|----------------------------|
| rev/min<br>1  | cm³/1000 strokes<br>2 | rev/min<br>3                              | rev/min<br>4   | cm³/1000 strokes<br>5 | rev/min<br>6                                       | cm³/1000 strokes<br>7 | rev/min<br>8       | Control rod travel mm<br>9 |

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AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full load delivery<br>Control rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤<br>Control rod travel mm |    |
|---|------------------|---------------------------------------|--|------------------|--|------------------|---|----|
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                   | mm |
| 1   | 2                | 3                                     | 4  | 5                | 6  | 7                | 8   | 9  |

AC-Nr. 4 394 740/741

|      |             |           |
|------|-------------|-----------|
| 1020 | 213,0-226,0 | 1030-1040 |
| 915  | 208,0-218,0 |           |

AC-Nr. 4 394 744

|      |       |           |     |             |     |           |
|------|-------|-----------|-----|-------------|-----|-----------|
| 1050 | 250,0 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 256,0 |           |     |             |     |           |

AC-Nr. 4 394 745

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| 750 | 196,0-202,0 |     |     |             |     |           |

AC-Nr. 4 394 746

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 875 | 161,0-165,0 | 890 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 140,0-144,0 |     |     |             |     |           |

AC-Nr. 4 394 771

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 113,0-119,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 102,0-108,0 |     |     |             |     |           |

AC-Nr. 4 394 773

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 125,0-131,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 134,0-140,0 |     |     |             |     |           |

AC-Nr. 4 394 775

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 192,0-198,0 | 1045 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 180,0-186,0 |      |     |             |     |           |

AC-Nr. 4 394 777

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 200,0-206,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 180,0-186,0 |      |     |             |     |           |
| 600  | 189,0-195,0 |      |     |             |     |           |

AC-Nr. 4 394 779

|     |             |        |     |             |     |           |
|-----|-------------|--------|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|-----|-------------|-----|-----------|

AC-Nr. 4 394 781

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 230,0-236,0 | 1040 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 207,0-213,0 |      |     |             |     |           |
| 700  | 209,0-215,0 |      |     |             |     |           |

AC-Nr. 4 394 783

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 227,0-233,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 197,0-203,0 |      |     |             |     |           |

AC-Nr. 4 394 785

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 235,0-241,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700  | 263,0-269,0 |      |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 787

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1000 | 220,0-226,0 | 1020 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 209,0-215,0 |      |  |     |             |     |           |
| 600  | 227,0-233,0 |      |  |     |             |     |           |

AC-Nr. 4 394 789

|     |       |     |  |     |             |     |      |
|-----|-------|-----|--|-----|-------------|-----|------|
| 910 | 190,0 | 930 |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------|-----|--|-----|-------------|-----|------|

AC-Nr. 4 394 791

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 160,0-166,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 139,0-145,0 |     |  |     |             |     |           |

AC-Nr. 4 394 793

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 600 | 124,0-130,0 | 620 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 795

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 700 | 127,0-133,0 | 720 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |     |             |     |           |

AC-Nr. 4 394 797

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 800 | 139,0-145,0 | 820 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |     |             |     |           |

AC-Nr. 4 394 799

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 157,0-163,0 | 945 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 145,0-151,0 |     |  |     |             |     |           |
| 600 | 134,0-140,0 |     |  |     |             |     |           |

AC-Nr. 4 394 801

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 154,0-160,0 |      |  |     |             |     |           |
| 700  | 142,0-148,0 |      |  |     |             |     |           |

AC-Nr. 4 394 803

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 161,0-175,0 |      |  |     |             |     |           |
| 800  | 147,0-153,0 |      |  |     |             |     |           |

AC-Nr. 4 394 805

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 162,0-168,0 |     |  |     |             |     |           |

AC-Nr. 4 394 807

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 184,0-190,0 |     |  |     |             |     |           |

AC-Nr. 4 394 809

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 209,0-215,0 |     |  |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Fuel delivery characteristics<br>high idle speed ⑤b |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤ |                       |
|---|------------------|------------------------------------|---|------------------|--|------------------|------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min   | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3                                  | 4   | 5                | 6  | 7                | 8                | 9                     |

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AC-Nr. 4 394 811

750 185,0-191,0  
600 222,0-228,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0  
600 223,0-229,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0  
900 202,0-208,0  
700 207,0-213,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 817

1000 240,0-246,0  
800 224,0-230,0  
600 237,0-243,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 819

1050 245,0-251,0  
900 224,0-230,0  
700 237,0-243,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 821

1000 217,0-223,0  
800 197,0-203,0  
600 219,0-225,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 823

900 210,0-216,0  
700 212,0-218,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0  
900 281,0-287,0  
700 293,0-299,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 827

1050 234,0-240,0  
900 246,0-252,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 829

1050 262,0-268,0  
900 279,0-285,0  
700 289,0-295,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 831

1050 241,0-247,0  
900 265,0-271,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |  |    |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery (6)<br>idle switching point |                               | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                  | mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8  | 9  |

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AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

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## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |   |                  |   |   |
|---|------------------|---|--|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery (6)<br>idle<br>switching point |                  | Low idle speed (5)<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 4  | 5                | 6   | 7                | 8   | 9 |
|   |                  |   |  |                  |   |                  |   |   |

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AC-Nr. 4 394 861

1050 296,0-302,0 1070  
900 301,0-307,0  
700 309,0-315,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 863

1050 253,0-256,0 1070  
900 252,0-258,0  
700 269,0-275,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 865

1050 208,0-214,0 1070  
900 230,0-236,0  
700 260,0-266,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 867

900 181,0-187,0 920  
700 172,0-178,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 869

925 176,0-182,0 945  
800 162,0-168,0  
700 177,0-183,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 871

900 173,0-179,0 920  
800 160,0-166,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 873

925 237,0-243,0 945  
800 251,0-257,0  
700 269,0-275,0

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 875

700 218,0-224,0 720  
600 240,0-246,0

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 877

1050 213,0-219,0 1060-1080  
900 212,0-218,0  
700 240,0-246,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 879

1050 211,0-220,0 1055-1075 975 237,5-247,0 100 130,0-170,0 19,0-25,0  
700 258,5-269,5  
600 255,5-266,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |   |   |
|---|------------------|---|--|------------------|--|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br><br>Control rod travel mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9 |

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AC-Nr. 4 394 881

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |     |             |     |           |

AC-Nr. 4 394 883

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 885

|     |       |  |     |             |     |      |
|-----|-------|--|-----|-------------|-----|------|
| 600 | 258,0 |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|-----|-------------|-----|------|

AC-Nr. 4 394 891

|     |             |     |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|-----|-------------|-----|------|

AC-Nr. 4 394 893

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |     |             |     |           |

AC-Nr. 4 394 895

|      |             |      |     |             |     |      |
|------|-------------|------|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |     |             |     |      |

AC-Nr. 4 394 897

|     |             |     |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |     |             |     |      |

AC-Nr. 4 394 899

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |     |             |     |           |

AC-Nr. 4 394 905

|      |             |      |     |             |     |      |
|------|-------------|------|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |     |             |     |      |

AC-Nr. 4 394 907

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |     |             |     |           |

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1050 | 202,0-210,5 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 911

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1000 | 230,5-239,5 | 1010-1030 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 915

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1000 | 203,0-211,5 | 1010-1030 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

**Testoil-ISO 4113**



## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|---|--|------------------|--|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8                  | 9                     |

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AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 ALO 16,0 e

En

PE 6 P 120 A 420 LS 245

RQV 300...1050 PA 202 KR

supersedes

0 401 846 270

company Allis-Chalmers

1 - 5 - 3 - 6 - 2 - 4

engine: 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>5 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1000                             | 12                            | 26,4 - 27,1  |   |                               | 1,0  |  |
| 600                              | 6                             | 8,6 - 9,8  |   |                               |  |  |
|                                  | 12                            | 26,3 - 28,1  |   |                               |  |  |
|                                  | 15                            | 33,8 - 36,2  |   |                               |  |  |
| 200                              | 6                             | 4,2 - 5,2  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in 

## B. Governor Settings

| Upper rated speed                     |         |                       | Intermediate rated speed              |         |                       | Lower rated speed                     |         |                       | Sliding sleeve travel |    |
|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|---------------------------------------|---------|-----------------------|-----------------------|----|
| Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | Degree of deflection of control lever | rev/min | Control rod travel mm | rev/min               | mm |
| 1                                     | 2       | 3                     | 4                                     | 5       | 6                     | 7                                     | 8       | 9                     | 10                    | 11 |
| 66°                                   | 1050    | 15,0-18,0             |                                       |         |                       | 10°                                   | 250     | 6,4-8,0               |                       |    |
|                                       | 1100    | 10,7-15,0             |                                       |         |                       |                                       | 350     | 3,0-5,2               |                       |    |
|                                       | 1150    | 6,0-11,6              |                                       |         |                       |                                       | 450     | 1,3-2,8               |                       |    |
|                                       | 1210    | 0,7                   |                                       |         |                       |                                       | 550     | 0                     |                       |    |
|                                       | 1300    | 0                     |                                       |         |                       |                                       |         |                       |                       |    |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Rotational-speed limitation<br>intermediate speed | Fuel delivery characteristics<br>high idle speed |                               | Starting fuel delivery<br>idle switching point |                               | Torque-control travel |                       |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|-----------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min               | Control rod travel mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                     | 9                     |
|   |                               |   |  |                               |  |                               |                       |                       |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |   |                               |   |                               |  |    |
|---|-------------------------------|---|---|-------------------------------|---|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>idle<br>switching point (6) |                               | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                  | mm |
| 1   | 2                             | 3   | 1   | 2                             | 6   | 7                             | 8  | 9  |

AC-Nr. 4 320 754

1025 91,0- 93,0 1040 700 99,0-103,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 793

1000 122,0-124,0 1020 700 126,0-130,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 815

900 100,0-106,0 910-920 700 101,0-107,0 100 90,0-130,0 300 19,0-25,0  
600 111,0-117,0

AC-Nr. 4 320 816

900 97,0-103,0 910-920 800 98,0-104,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 817

1100 139,0-143,0 1120 800 149,0-154,0 100 90,0-130,0 375 9,0-19,0  
600 153,0-161,0

AC-Nr. 4 320 829

1100 139,0-143,0 1120 800 149,0-154,0 100 90,0-130,0 375 9,0-19,0  
600 153,0-161,0

AC-Nr. 4 320 933

900 102,0-110,0 1040 800 107,0-116,0 100 90,0-130,0 300 25,0

AC-Nr. 4 320 939

900 98,5 ± 3 1040 700 107,5 ± 4 100 90,0-130,0 300 25,0

AC-Nr. 4 320 940

900 78,0- 86,0 1040 700 100,0-109,0 100 90,0-130,0 300 25,0

AC-Nr. 4 320 941

1025 91,0- 93,0 1040 700 99,0-103,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 942

1000 122,0-124,0 1020 700 126,0-130,0 100 90,0-130,0 300 19,0-25,0

AC-Nr. 4 320 980

900 108,0-116,0 1120 800 - 100 90,0-130,0 375 9,0-19,0

AC-Nr. 4 320 981

900 111,0-119,0 1020 800 112,0-118,0 100 90,0-130,0 300 25,0

AC-Nr. 4 321 016

750 95,0-101,0 1020 750 95,0-101,0 100 90,0-130,0 300 25,0

AC-Nr. 4 321 064

1000 112,0 1030 800 112,5 100 90,0-130,0 300 25,0

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |   |    |
|---|------------------|---------------------------------------|---|------------------|---|------------------|---|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>idle<br>switching point |                  | Low idle speed ⑤<br>Control rod<br>travel |    |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min                                   | mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8   | 9  |

AC-Nr. 4 359 816

|     |             |         |     |             |     |            |     |           |
|-----|-------------|---------|-----|-------------|-----|------------|-----|-----------|
| 900 | 100,0-106,0 | 910-920 | 700 | 101,0-107,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|     |             |         | 600 | 111,0-117,0 |     |            |     |           |

AC-Nr. 4 359 826

|     |            |         |     |            |     |            |     |           |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|
| 900 | 97,0-103,0 | 910-920 | 800 | 98,0-104,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 828

|      |             |      |     |             |     |            |     |          |
|------|-------------|------|-----|-------------|-----|------------|-----|----------|
| 1100 | 139,0-143,0 | 1120 | 800 | 149,0-154,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0 |
|      |             |      | 600 | 153,0-161,0 |     |            |     |          |

AC-Nr. 4 359 830

|      |            |      |     |            |     |            |     |           |
|------|------------|------|-----|------------|-----|------------|-----|-----------|
| 1025 | 91,0- 93,0 | 1040 | 700 | 99,0-103,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|------------|------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 832

|      |             |      |     |             |     |            |     |           |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|
| 1000 | 122,0-124,0 | 1020 | 700 | 126,0-130,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|

AC-Nr. 4 392 693

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 205,0-215,0 | 1065-80 | 900 | 167,0-177,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 695

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 900 | 149,0-155,0 | 920 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

AC-Nr. 4 392 697

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 699

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 701

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 703

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-230,0 | 1060-70 | 900 | 200,0-210,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 205,0-215,0 |     |             |     |           |

AC-Nr. 4 392 707

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 243,0-253,0 | 1060-80 | 900 | 222,0-232,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 235,0-245,0 |     |             |     |           |

AC-Nr. 4 392 709

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 392 711

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 600 | 231,0-237,0 | 620 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
|---|------------------|------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                  | 4a  | 5                | 6   | 7                | 8                | 9                           |

-4-

AC-Nr. 4 392 715

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 187,0-193,0 | 1070 | 900 | 174,0-180,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 175,0-181,0 |     |             |     |           |

AC-Nr. 4 392 717

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 224,0-230,0 | 1070 | 800 | 185,0-191,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 719

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 200,0-206,0 | 1070 | 900 | 190,0-196,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 214,0-220,0 |     |             |     |           |

AC-Nr. 4 392 721

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 242,0-248,0 | 1070 | 900 | 220,0-226,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 230,0-236,0 |     |             |     |           |

AC-Nr. 4 392 723

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 244,0-250,0 | 770 | 700 | 253,0-259,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 725

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 239,0-245,0 | 820 | 600 | 248,0-254,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 727

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 232,0-238,0 | 920 | 700 | 253,0-259,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 729

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 212,0-218,0 | 1020 | 800 | 230,0-236,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 731

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 288,0-294,0 | 920 | 700 | 287,0-293,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 735

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 239,0-245,0 | 1070 | 900 | 233,0-239,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 273,0-279,0 |     |             |     |           |

AC-Nr. 4 392 737

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 215,0-221,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 220,0-226,0 |     |             |     |           |

AC-Nr. 4 392 739

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1050 | 900 | 195,0-201,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 225,0-231,0 |     |             |     |           |

AC-Nr. 4 392 741

|      |             |      |     |             |     |             |   |   |
|------|-------------|------|-----|-------------|-----|-------------|---|---|
| 1050 | 213,0-219,0 | 1070 | 900 | 202,0-208,0 | 100 | 130,0-170,0 | - | - |
|      |             |      | 700 | 230,0-236,0 |     |             |   |   |

AC-Nr. 4 392 743

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-226,0 | 1070 | 900 | 210,0-216,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 243,0-249,0 |     |             |     |           |

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J. P.

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
|---|------------------|------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                  | 4a  | 1                | 2   | 6                | 7                | 8                           |

AC-Nr. 4 392 747

1050 227,0-233,0 1070 900 208,0-214,0 100 130,0-170,0 300 19,0-25,0  
700 247,0-253,0

AC-Nr. 4 392 749

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 750

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 768

800 123,0-133,0 820 600 132,0-142,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 775/776

875 162,0-164,0 890 600 140,0-144,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 777

950 205,0-207,0 970 700 195,0-199,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 778

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 3 392 779

1025 190,0-200,0 1030-40 1000 191,0-201,0 100 130,0-170,0 300 19,0-25,0  
900 178,0-188,0

AC-Nr. 4 392 781

1025 228,0-238,0 1050-60 900 205,0-215,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-217,0

AC-Nr. 4 392 953

940 185,0-195,0 955-65 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 095

1050 211,0-221,0 1060-80 900 210,0-220,0 100 130,0-170,0 300 19,0-25,0  
700 238,0-248,0

AC-Nr. 4 393 307

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 393 431

1050 208,0-214,0 1070 900 230,0-235,0 100 130,0-170,0 300 19,0-25,0  
700 260,0-266,0

AC-Nr. 4 393 821

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

### C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b<br>4a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>Idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                       |
|---|------------------|--|---|------------------|---|------------------|------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                                  | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3  | 1   | 2                | 6   | 7                | 8                | 9                     |

AC-Nr. 4 393 823

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 393 825

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 827

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 393 829

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 831

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 393 833

1050 264,0 1060-1080 900 280,5 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 835

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

AC-Nr. 4 393 837

1050 227,0-233,0 1070 900 208,0-214,0 100 130,0-170,0 300 19,0-25,0  
700 247,0-253,0

AC-Nr. 4 393 890

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 393 891

955 208,0 965-975 895 203,0 - - - -

AC-Nr. 4 393 961

900 181,0-187,0 920 700 172,0-178,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 001

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 017

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 394 020

700 249,0-257,0 725 600 258,0-264,0 100 130,0-170,0 300 19,0-29,0

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |   |   |
|---|------------------|---------------------------------------|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8   | 9 |

|                  |      |             |        |            |                            |     |             |     |           |
|------------------|------|-------------|--------|------------|----------------------------|-----|-------------|-----|-----------|
| AC-Nr. 4 394 062 | 800  | 113,0-119,0 | 820    | 600        | 102,0-108,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 064 | 875  | 161,0-165,0 | 890    | 600        | 140,0-144,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 066 | 800  | 125,0-131,0 | 820    | 600        | 134,0-140,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 068 | 1025 | 192,0-198,0 | 1045   | 900        | 180,0-186,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 070 | 1000 | 200,0-206,0 | 1020   | 800<br>600 | 180,0-186,0<br>189,0-195,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 072 | 940  | 185,0-195,0 | 955-65 | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 074 | 1025 | 230,0-236,0 | 1040   | 900<br>700 | 207,0-213,0<br>209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 076 | 1000 | 227,0-233,0 | 1020   | 800        | 197,0-203,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 078 | 1000 | 235,0-241,0 | 1020   | 700        | 263,0-269,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 080 | 1000 | 220,0-226,0 | 1020   | 800<br>600 | 209,0-215,0<br>227,0-233,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 082 | 910  | 190,0       | 930    | -          | -                          | 100 | 130,0-170,0 | 300 | 25,0      |
| AC-Nr. 4 394 084 | 900  | 160,0-166,0 | 920    | 700        | 139,0-145,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 086 | 600  | 124,0-130,0 | 620    | -          | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 088 | 700  | 127,0-133,0 | 720    | 600        | 124,0-130,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 394 090 | 800  | 139,0-145,0 | 820    | 600        | 124,0-130,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |                  |                             |
|---|------------------|---------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>Idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8                | 9                           |

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AC-Nr. 4 394 092

925 157,0-163,0 945 800 145,0-151,0 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

AC-Nr. 4 394 094

1000 180,0-186,0 1020 800 154,0-160,0 100 130,0-170,0 300 19,0-25,0  
700 142,0-148,0

AC-Nr. 4 394 096

1050 207,0-213,0 1070 900 161,0-175,0 100 130,0-170,0 300 19,0-25,0  
800 147,0-153,0

AC-Nr. 4 394 098

900 187,0-193,0 920 700 162,0-168,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 100

900 200,0-206,0 920 700 184,0-190,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 102

900 203,0-209,0 920 700 209,0-215,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 104

750 185,0-191,0 770 600 222,0-228,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 106

800 210,0-218,0 820 600 223,0-229,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 108

1050 222,0-228,0 1070 900 202,0-208,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-213,0

AC-Nr. 4 394 110

1000 240,0-246,0 1020 800 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
600 237,0-243,0

AC-Nr. 4 394 112

1050 245,0-251,0 1070 900 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
700 237,0-243,0

AC-Nr. 4 394 114

1000 217,0-223,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 219,0-225,0

AC-Nr. 4 394 116

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 118

1050 269,0-275,0 1070 900 281,0-287,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

K12

J5-12

Testoil-ISO 4113

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |   |                  |   |                  |                    |                             |
|---|------------------|---|---|------------------|---|------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Starting fuel delivery<br>idle<br>switching point (6) |                  | Low idle speed (5) |                             |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                | 3   | 1   | 2                | 6   | 7                | 8                  | 9                           |

AC-Nr. 4 394 120

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 | 900 | 246,0-252,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 268,0-274,0 |     |             |     |           |

AC-Nr. 4 394 122

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 279,0-285,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 289,0-295,0 |     |             |     |           |

AC-Nr. 4 394 124

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 | 900 | 265,0-271,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 268,0-274,0 |     |             |     |           |

AC-Nr. 4 394 126

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 232,0-238,0 | 920 | 700 | 253,0-259,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 128

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 244,0-250,0 | 770 | 700 | 253,0-259,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 130

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 239,0-245,0 | 820 | 600 | 248,0-254,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 132

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 212,0-218,0 | 1020 | 800 | 230,0-236,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 134

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 288,0-294,0 | 920 | 700 | 287,0-293,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 136

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 255,0-261,0 | 1020 | 800 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 270,0-276,0 |     |             |     |           |

AC-Nr. 4 394 138

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 239,0-245,0 | 1070 | 900 | 233,0-239,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 273,0-279,0 |     |             |     |           |

AC-Nr. 4 394 140

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 215,0-221,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 220,0-226,0 |     |             |     |           |

AC-Nr. 4 394 142

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 222,0-228,0 | 920 | 700 | 254,0-260,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 144

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 257,0-263,0 | 1070 | 750 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 148

|      |             |      |     |             |     |             |     |      |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|
| 1050 | 295,0-303,0 | 1075 | 900 | 309,0-315,0 | 100 | 130,0-170,0 | 300 | 25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |   |   |
|---|------------------|---------------------------------------|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>Idle<br>switching point |                  | Low idle speed ⑤<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8   | 9 |

AC-Nr. 4 394 150

1050 268,0-274,0 1070 900 274,0-280,0 100 130,0-170,0 300 19,0-25,0  
700 280,0-286,0

AC-Nr. 4 394 152

1050 262,0-268,0 1070 900 267,0-273,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-273,0

AC-Nr. 4 394 154

1050 279,0-285,0 1070 900 283,0-289,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

AC-Nr. 4 394 156

1050 296,0-302,0 1070 900 301,0-307,0 100 130,0-170,0 300 19,0-25,0  
700 309,0-315,0

AC-Nr. 4 394 158

" 4 394 157

1050 253,0-256,0 1070 900 252,0-258,0 100 130,0-170,0 300 19,0-25,0  
700 269,0-275,0

AC-Nr. 4 394 160

1050 208,0-214,0 1070 900 230,0-235,0 100 130,0-170,0 300 19,0-25,0  
700 260,0-266,0

AC-Nr. 4 394 162

900 181,0-187,0 920 700 172,0-178,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 164

925 176,0-182,0 945 800 162,0-168,0 100 130,0-170,0 300 19,0-25,0  
700 177,0-183,0

AC-Nr. 4 394 166

900 173,0-179,0 920 800 160,0-166,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 168

925 237,0-243,0 945 800 251,0-257,0 100 130,0-170,0 300 27,0-33,0  
700 269,0-275,0

AC-Nr. 4 394 170

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 176

1050 213,0-219,0 1070 900 212,0-218,0 100 130,0-170,0 300 19,0-25,0  
700 240,0-246,0

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel mm |   |
|---|------------------|---|--|------------------|--|------------------|---|---|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                     |   |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9 |

AC-Nr. 4 394 246

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |     |           |
|      |             |           | 600 | 255,5-266,0 |     |             |     |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 250

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 257

|     |       |  |  |  |     |             |     |      |
|-----|-------|--|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 314

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 331

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 265,0-271,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 332

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 274,0-280,0 |      |  |  |     |             |     |           |
| 700  | 280,0-286,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 347

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 281,0-287,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 348

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 246,0-252,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 349

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 350

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 279,0-285,0 |      |  |  |     |             |     |           |
| 700  | 289,0-295,0 |      |  |  |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |  |  |                               |  |                               |   |    |
|---|-------------------------------|--|--|-------------------------------|--|-------------------------------|---|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a)<br>rev/min | Fuel delivery characteristics (5a)<br>high idle speed (5b)<br>rev/min      cm <sup>3</sup> /1000 strokes |                               | Starting fuel delivery (6)<br>idle switching point<br>rev/min      cm <sup>3</sup> /1000 strokes |                               | Low idle speed (5)<br>Control rod travel<br>rev/min      mm |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min   | mm |
| 1   | 2                             | 3  | 4  | 5                             | 6  | 7                             | 8   | 9  |

AC-Nr. 4 394 351

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 352

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 267,0-273,0 |      |  |  |     |             |     |           |
| 700  | 267,0-273,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 353

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 283,0-289,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 354

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 356

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 386

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 390

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 428

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 473

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 |  |  | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |  |  |     |             |     |      |

AC-Nr. 4 394 501

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 521

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 527

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |  |  |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤ |                       |
|---|------------------|---------------------------------------|--|------------------|--|------------------|------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3                                     | 4  | 5                | 6  | 7                | 8                | 9                     |

AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br>Control rod travel mm |    |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|---|----|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                     | mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8   | 9  |

AC-Nr. 4 394 740/741

|      |             |           |
|------|-------------|-----------|
| 1020 | 213,0-226,0 | 1030-1040 |
| 915  | 208,0-218,0 |           |

AC-Nr. 4 394 744

|      |       |           |     |             |     |           |
|------|-------|-----------|-----|-------------|-----|-----------|
| 1050 | 250,0 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 256,0 |           |     |             |     |           |

AC-Nr. 4 394 745

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| 750 | 196,0-202,0 |     |     |             |     |           |

AC-Nr. 4 394 746

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 875 | 161,0-165,0 | 890 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 140,0-144,0 |     |     |             |     |           |

AC-Nr. 4 394 771

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 113,0-119,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 102,0-108,0 |     |     |             |     |           |

AC-Nr. 4 394 773

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 125,0-131,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 134,0-140,0 |     |     |             |     |           |

AC-Nr. 4 394 775

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 192,0-198,0 | 1045 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 180,0-186,0 |      |     |             |     |           |

AC-Nr. 4 394 777

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 200,0-206,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 180,0-186,0 |      |     |             |     |           |
| 600  | 189,0-195,0 |      |     |             |     |           |

AC-Nr. 4 394 779

|     |             |        |     |             |     |           |
|-----|-------------|--------|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|-----|-------------|-----|-----------|

AC-Nr. 4 394 781

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 230,0-236,0 | 1040 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 207,0-213,0 |      |     |             |     |           |
| 700  | 209,0-215,0 |      |     |             |     |           |

AC-Nr. 4 394 783

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 227,0-233,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 197,0-203,0 |      |     |             |     |           |

AC-Nr. 4 394 785

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 235,0-241,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700  | 263,0-269,0 |      |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |         |  |                               |  |                               |  |    |
|---|-------------------------------|---|---------|--|-------------------------------|--|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) |         | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery (6)<br>idle switching point |                               | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                  | mm |
| 1   | 2                             | 3   | 4       | 5  |                               | 6  | 7                             | 8  | 9  |

AC-Nr. 4 394 787

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1000 | 220,0-226,0 | 1020 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 209,0-215,0 |      |  |  |     |             |     |           |
| 600  | 227,0-233,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 789

|     |       |     |  |  |     |             |     |      |
|-----|-------|-----|--|--|-----|-------------|-----|------|
| 910 | 190,0 | 930 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 791

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 160,0-166,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 139,0-145,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 793

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 600 | 124,0-130,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 795

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 127,0-133,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 797

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 800 | 139,0-145,0 | 820 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 799

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 925 | 157,0-163,0 | 945 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 145,0-151,0 |     |  |  |     |             |     |           |
| 600 | 134,0-140,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 801

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 154,0-160,0 |      |  |  |     |             |     |           |
| 700  | 142,0-148,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 803

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 161,0-175,0 |      |  |  |     |             |     |           |
| 800  | 147,0-153,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 805

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 162,0-168,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 807

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 184,0-190,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 809

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 209,0-215,0 |     |  |  |     |             |     |           |



# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤ |                       |
|---|------------------|---------------------------------------|--|------------------|--|------------------|------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3                                     | 4  | 5                | 6  | 7                | 8                | 9                     |

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AC-Nr. 4 394 811

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 222,0-228,0 |     |     |             |     |           |

AC-Nr. 4 394 813

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 223,0-229,0 |     |     |             |     |           |

AC-Nr. 4 394 815

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1050 | 222,0-228,0 | 1070 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 202,0-208,0 |      |     |             |     |           |
| 700  | 207,0-213,0 |      |     |             |     |           |

AC-Nr. 4 394 817

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 240,0-246,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 224,0-230,0 |      |     |             |     |           |
| 600  | 237,0-243,0 |      |     |             |     |           |

AC-Nr. 4 394 819

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1050 | 245,0-251,0 | 1070 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 224,0-230,0 |      |     |             |     |           |
| 700  | 237,0-243,0 |      |     |             |     |           |

AC-Nr. 4 394 821

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 197,0-203,0 |      |     |             |     |           |
| 600  | 219,0-225,0 |      |     |             |     |           |

AC-Nr. 4 394 823

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 900 | 210,0-216,0 | 920 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 212,0-218,0 |     |     |             |     |           |

AC-Nr. 4 394 825

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 281,0-287,0 |      |     |             |     |           |
| 700  | 293,0-299,0 |      |     |             |     |           |

AC-Nr. 4 394 827

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 246,0-252,0 |      |     |             |     |           |
| 700  | 268,0-274,0 |      |     |             |     |           |

AC-Nr. 4 394 829

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 279,0-285,0 |      |     |             |     |           |
| 700  | 289,0-295,0 |      |     |             |     |           |

AC-Nr. 4 394 831

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 265,0-271,0 |      |     |             |     |           |
| 700  | 268,0-274,0 |      |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br>Control rod travel mm |   |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|---|---|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                     |   |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8   | 9 |

AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

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## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |  |                               |  |                               |  |    |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery (6)<br>idle switching point |                               | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                  | mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8  | 9  |

AC-Nr. 4 394 861

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 863

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 865

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 867

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 172,0-178,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 869

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 162,0-168,0 |     |  |  |     |             |     |           |
| 700 | 177,0-183,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 871

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 160,0-166,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 873

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 800 | 251,0-257,0 |     |  |  |     |             |     |           |
| 700 | 269,0-275,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 875

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 600 | 240,0-246,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 877

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 212,0-218,0 |           |  |  |     |             |     |           |
| 700  | 240,0-246,0 |           |  |  |     |             |     |           |

AC-Nr. 4 394 879

|      |             |           |     |             |     |             |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |           |
|      |             |           | 600 | 255,5-266,0 |     |             |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |   |   |
|---|------------------|---|--|------------------|--|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br><br>Control rod travel mm |   |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9 |

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AC-Nr. 4 394 881

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |     |             |     |           |

AC-Nr. 4 394 883

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 885

|     |       |  |     |             |     |      |
|-----|-------|--|-----|-------------|-----|------|
| 600 | 258,0 |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|-----|-------------|-----|------|

AC-Nr. 4 394 891

|     |             |     |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|-----|-------------|-----|------|

AC-Nr. 4 394 893

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |     |             |     |           |

AC-Nr. 4 394 895

|      |             |      |     |             |     |      |
|------|-------------|------|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |     |             |     |      |

AC-Nr. 4 394 897

|     |             |     |     |             |     |      |
|-----|-------------|-----|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |     |             |     |      |

AC-Nr. 4 394 899

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |     |             |     |           |

AC-Nr. 4 394 905

|      |             |      |     |             |     |      |
|------|-------------|------|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |     |             |     |      |

AC-Nr. 4 394 907

|     |       |     |     |             |     |           |
|-----|-------|-----|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |     |             |     |           |

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1050 | 202,0-210,5 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 911

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1000 | 230,5-239,5 | 1010-1030 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

AC-Nr. 4 394 915

|      |             |           |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-----------|
| 1000 | 203,0-211,5 | 1010-1030 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|-----|-------------|-----|-----------|

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                       | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                       | Starting fuel delivery<br>idle switching point (6) |                       | Low idle speed (5)<br>Control rod travel mm |         |
|---|-----------------------|---|--|-----------------------|--|-----------------------|---|---------|
| rev/min<br>1  | cm³/1000 strokes<br>2 | rev/min<br>3                              | rev/min<br>4   | cm³/1000 strokes<br>5 | rev/min<br>6                                       | cm³/1000 strokes<br>7 | rev/min<br>8                                | mm<br>9 |

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AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

# Test Specifications Fuel Injection Pumps ① and Governors

En

PE 6 P 120 A 420 LS 245

RQV 300...1050 PA 239 KR

supersedes

0 401 846 302

company Allis-Chalmers

1 - 5 - 3 - 6 - 2 - 4

engine: 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

| Rotational speed<br>rev/min<br>1 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Difference<br>cm <sup>3</sup> /100 strokes<br>4 | Control rod travel<br>mm<br>2 | Fuel delivery<br>cm <sup>3</sup> /100 strokes<br>3 | Spring pre-tensioning<br>(torque-control valve)<br>mm<br>6 |
|----------------------------------|-------------------------------|--|---|-------------------------------|--|--|
| 1000                             | 12                            | 26,4 - 27,1  |   |                               | 1,0  |  |
| 600                              | 6                             | 8,6 - 9,8  |   |                               |  |  |
|                                  | 12                            | 26,3 - 28,1  |   |                               |  |  |
|                                  | 15                            | 33,8 - 36,2  |   |                               |  |  |
| 200                              | 6                             | 4,2 - 5,2  |   |                               |  |  |

Adjust the fuel delivery from each outlet according to the values in .

## B. Governor Settings

| Upper rated speed                     |                                      |  | Intermediate rated speed              |         |                          | Lower rated speed                     |                          |                                    | Sliding sleeve travel |    |
|---------------------------------------|--------------------------------------|--|---------------------------------------|---------|--------------------------|---------------------------------------|--------------------------|------------------------------------|-----------------------|----|
| Degree of deflection of control lever | rev/min<br>Control rod travel<br>mm  | Control rod travel<br>mm<br>rev/min            | Degree of deflection of control lever | rev/min | Control rod travel<br>mm | Degree of deflection of control lever | rev/min                  | Control rod travel<br>mm           | rev/min               | mm |
| 1                                     | 2                                    | 3  | 4                                     | 5       | 6                        | 7                                     | 8                        | 9                                  | 10                    | 11 |
| 66°                                   | 1050<br>1100<br>1150<br>1210<br>1300 | 15,0-18,0<br>10,7-15,0<br>6,0-11,6<br>0,7<br>0 |                                       |         |                          | 10°                                   | 250<br>350<br>450<br>550 | 6,4-8,0<br>3,0-5,2<br>1,3-2,8<br>0 |                       |    |
|                                       |                                      |  |                                       |         |                          | 3a                                    |                          |                                    |                       |    |

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                               | Rotational-speed<br>limitation<br>intermediate speed |                               | Fuel delivery characteristics |                               | Starting fuel delivery<br>Idle<br>switching point |                               | Torque-control<br>travel |                          |
|---|-------------------------------|--|-------------------------------|-------------------------------|-------------------------------|---|-------------------------------|--------------------------|--------------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                       | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                  | Control rod travel<br>mm |
| 1   | 2                             | 3  | 4                             | 5                             | 6                             | 7   | 8                             | 9                        |                          |
|   |                               |  |                               |                               |                               |   |                               |                          |                          |

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |                  |                             |
|---|------------------|---------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8                | 9                           |

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|                  |             |         |            |                            |     |            |     |           |
|------------------|-------------|---------|------------|----------------------------|-----|------------|-----|-----------|
| AC-Nr. 4 320 754 |             |         |            |                            |     |            |     |           |
| 1025             | 91,0- 93,0  | 1040    | 700        | 99,0-103,0                 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 793 |             |         |            |                            |     |            |     |           |
| 1000             | 122,0-124,0 | 1020    | 700        | 126,0-130,0                | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 815 |             |         |            |                            |     |            |     |           |
| 900              | 100,0-106,0 | 910-920 | 700<br>600 | 101,0-107,0<br>111,0-117,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 816 |             |         |            |                            |     |            |     |           |
| 900              | 97,0-103,0  | 910-920 | 800        | 98,0-104,0                 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 817 |             |         |            |                            |     |            |     |           |
| 1100             | 139,0-143,0 | 1120    | 800<br>600 | 149,0-154,0<br>153,0-161,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0  |
| AC-Nr. 4 320 829 |             |         |            |                            |     |            |     |           |
| 1100             | 139,0-143,0 | 1120    | 800<br>600 | 149,0-154,0<br>153,0-161,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0  |
| AC-Nr. 4 320 933 |             |         |            |                            |     |            |     |           |
| 900              | 102,0-110,0 | 1040    | 800        | 107,0-116,0                | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 320 939 |             |         |            |                            |     |            |     |           |
| 900              | 98,5 ± 3    | 1040    | 700        | 107,5 ± 4                  | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 320 940 |             |         |            |                            |     |            |     |           |
| 900              | 78,0- 86,0  | 1040    | 700        | 100,0-109,0                | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 320 941 |             |         |            |                            |     |            |     |           |
| 1025             | 91,0- 93,0  | 1040    | 700        | 99,0-103,0                 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 942 |             |         |            |                            |     |            |     |           |
| 1000             | 122,0-124,0 | 1020    | 700        | 126,0-130,0                | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 320 980 |             |         |            |                            |     |            |     |           |
| 900              | 108,0-116,0 | 1120    | 800        | -                          | 100 | 90,0-130,0 | 375 | 9,0-19,0  |
| AC-Nr. 4 320 981 |             |         |            |                            |     |            |     |           |
| 900              | 111,0-119,0 | 1020    | 800        | 112,0-118,0                | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 321 016 |             |         |            |                            |     |            |     |           |
| 750              | 95,0-101,0  | 1020    | 750        | 95,0-101,0                 | 100 | 90,0-130,0 | 300 | 25,0      |
| AC-Nr. 4 321 064 |             |         |            |                            |     |            |     |           |
| 1000             | 112,0       | 1030    | 800        | 112,5                      | 100 | 90,0-130,0 | 300 | 25,0      |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Starting fuel delivery<br>idle<br>switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|---|---|------------------|---|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3   | 1   | 2                | 6   | 7                | 8                  | 9                     |

AC-Nr. 4 359 816

|     |             |         |     |             |     |            |     |           |
|-----|-------------|---------|-----|-------------|-----|------------|-----|-----------|
| 900 | 100,0-106,0 | 910-920 | 700 | 101,0-107,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|     |             |         | 600 | 111,0-117,0 |     |            |     |           |

AC-Nr. 4 359 826

|     |            |         |     |            |     |            |     |           |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|
| 900 | 97,0-103,0 | 910-920 | 800 | 98,0-104,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|-----|------------|---------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 828

|      |             |      |     |             |     |            |     |          |
|------|-------------|------|-----|-------------|-----|------------|-----|----------|
| 1100 | 139,0-143,0 | 1120 | 800 | 149,0-154,0 | 100 | 90,0-130,0 | 375 | 9,0-19,0 |
|      |             |      | 600 | 153,0-161,0 |     |            |     |          |

AC-Nr. 4 359 830

|      |            |      |     |            |     |            |     |           |
|------|------------|------|-----|------------|-----|------------|-----|-----------|
| 1025 | 91,0- 93,0 | 1040 | 700 | 99,0-103,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|------------|------|-----|------------|-----|------------|-----|-----------|

AC-Nr. 4 359 832

|      |             |      |     |             |     |            |     |           |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|
| 1000 | 122,0-124,0 | 1020 | 700 | 126,0-130,0 | 100 | 90,0-130,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|------------|-----|-----------|

AC-Nr. 4 392 693

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 205,0-215,0 | 1065-80 | 900 | 167,0-177,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 695

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 900 | 149,0-155,0 | 920 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

AC-Nr. 4 392 697

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 699

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 701

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 392 703

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 220,0-230,0 | 1060-70 | 900 | 200,0-210,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 205,0-215,0 |     |             |     |           |

AC-Nr. 4 392 707

|      |             |         |     |             |     |             |     |           |
|------|-------------|---------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 243,0-253,0 | 1060-80 | 900 | 222,0-232,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |         | 700 | 235,0-245,0 |     |             |     |           |

AC-Nr. 4 392 709

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 392 711

|     |             |     |   |   |   |   |     |           |
|-----|-------------|-----|---|---|---|---|-----|-----------|
| 600 | 231,0-237,0 | 620 | - | - | - | - | 300 | 19,0-25,0 |
|-----|-------------|-----|---|---|---|---|-----|-----------|

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### C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |                  |                       |
|---|------------------|---------------------------------------|---|------------------|---|------------------|------------------|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>idle<br>switching point |                  | Low idle speed ⑤ |                       |
| rev/min   | cm³/1000 strokes | rev/min ④a                            | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod travel mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8                | 9                     |

|                  |             |      |            |                            |     |             |     |           |
|------------------|-------------|------|------------|----------------------------|-----|-------------|-----|-----------|
| AC-Nr. 4 392 715 |             |      |            |                            |     |             |     |           |
| 1050             | 187,0-193,0 | 1070 | 900<br>700 | 174,0-180,0<br>175,0-181,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 717 |             |      |            |                            |     |             |     |           |
| 1050             | 224,0-230,0 | 1070 | 800        | 185,0-191,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 719 |             |      |            |                            |     |             |     |           |
| 1050             | 200,0-206,0 | 1070 | 900<br>700 | 190,0-196,0<br>214,0-220,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 721 |             |      |            |                            |     |             |     |           |
| 1050             | 242,0-248,0 | 1070 | 900<br>700 | 220,0-226,0<br>230,0-236,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 723 |             |      |            |                            |     |             |     |           |
| 750              | 244,0-250,0 | 770  | 700        | 253,0-259,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 725 |             |      |            |                            |     |             |     |           |
| 800              | 239,0-245,0 | 820  | 600        | 248,0-254,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 727 |             |      |            |                            |     |             |     |           |
| 900              | 232,0-238,0 | 920  | 700        | 253,0-259,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 729 |             |      |            |                            |     |             |     |           |
| 1000             | 212,0-218,0 | 1020 | 800        | 230,0-236,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 731 |             |      |            |                            |     |             |     |           |
| 900              | 288,0-294,0 | 920  | 700        | 287,0-293,0                | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| AC-Nr. 4 392 735 |             |      |            |                            |     |             |     |           |
| 1050             | 239,0-245,0 | 1070 | 900<br>700 | 233,0-239,0<br>273,0-279,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 737 |             |      |            |                            |     |             |     |           |
| 1000             | 215,0-221,0 | 1020 | 800<br>600 | 197,0-203,0<br>220,0-226,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 739 |             |      |            |                            |     |             |     |           |
| 1050             | 207,0-213,0 | 1050 | 900<br>700 | 195,0-201,0<br>225,0-231,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 741 |             |      |            |                            |     |             |     |           |
| 1050             | 213,0-219,0 | 1070 | 900<br>700 | 202,0-208,0<br>230,0-236,0 | 100 | 130,0-170,0 | -   | -         |
| AC-Nr. 4 392 743 |             |      |            |                            |     |             |     |           |
| 1050             | 220,0-226,0 | 1070 | 900<br>700 | 210,0-216,0<br>243,0-249,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
|---|------------------|------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                  | 4a  | 5                | 6   | 7                | 8                | 9                           |

|                      |             |         |             |                            |     |             |     |           |
|----------------------|-------------|---------|-------------|----------------------------|-----|-------------|-----|-----------|
| AC-Nr. 4 392 747     |             |         |             |                            |     |             |     |           |
| 1050                 | 227,0-233,0 | 1070    | 900<br>700  | 208,0-214,0<br>247,0-253,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 749     |             |         |             |                            |     |             |     |           |
| 1050                 | 230,0-234,0 | 1070    | -           | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 750     |             |         |             |                            |     |             |     |           |
| 1050                 | 230,0-234,0 | 1070    | -           | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 768     |             |         |             |                            |     |             |     |           |
| 800                  | 123,0-133,0 | 820     | 600         | 132,0-142,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 775/776 |             |         |             |                            |     |             |     |           |
| 875                  | 162,0-164,0 | 890     | 600         | 140,0-144,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 777     |             |         |             |                            |     |             |     |           |
| 950                  | 205,0-207,0 | 970     | 700         | 195,0-199,0                | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 778     |             |         |             |                            |     |             |     |           |
| 950                  | 208,0-214,0 | 990     | 750         | 196,0-202,0                | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| AC-Nr. 3 392 779     |             |         |             |                            |     |             |     |           |
| 1025                 | 190,0-200,0 | 1030-40 | 1000<br>900 | 191,0-201,0<br>178,0-188,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 781     |             |         |             |                            |     |             |     |           |
| 1025                 | 228,0-238,0 | 1050-60 | 900<br>700  | 205,0-215,0<br>207,0-217,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 392 953     |             |         |             |                            |     |             |     |           |
| 940                  | 185,0-195,0 | 955-65  | -           | -                          | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 393 095     |             |         |             |                            |     |             |     |           |
| 1050                 | 211,0-221,0 | 1060-80 | 900<br>700  | 210,0-220,0<br>238,0-248,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 393 307     |             |         |             |                            |     |             |     |           |
| 900                  | 210,0-216,0 | 920     | 700         | 212,0-218,0                | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| AC-Nr. 4 393 431     |             |         |             |                            |     |             |     |           |
| 1050                 | 208,0-214,0 | 1070    | 900<br>700  | 230,0-235,0<br>260,0-266,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| AC-Nr. 4 393 821     |             |         |             |                            |     |             |     |           |
| 1050                 | 242,0-248,0 | 1070    | 900<br>700  | 220,0-226,0<br>230,0-236,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |

## C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |   |   |
|---|------------------|---------------------------------------|---|------------------|---|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>idle<br>switching point |                  | Low idle speed ⑤<br><br>Control rod<br>travel<br>mm |   |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min   |   |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8   | 9 |

AC-Nr. 4 393 823

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 393 825

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 827

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 393 829

1050 230,0-234,0 1070 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 831

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 393 833

1050 264,0 1060-1080 900 280,5 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 835

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

AC-Nr. 4 393 837

1050 227,0-233,0 1070 900 208,0-214,0 100 130,0-170,0 300 19,0-25,0  
700 247,0-253,0

AC-Nr. 4 393 890

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 393 891

955 208,0 965-975 895 203,0 - - - -

AC-Nr. 4 393 961

900 181,0-187,0 920 700 172,0-178,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 001

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 017

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 394 020

700 249,0-257,0 725 600 258,0-264,0 100 130,0-170,0 300 19,0-29,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② | Starting fuel delivery<br>idle<br>switching point ⑥ | Low idle speed ⑤ |                             |
|---|------------------|------------------------------------|---|---|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min ④a                         | rev/min   | cm³/1000 strokes                                    | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                  | 1   | 2   | 6                | 7                           |
| 8   | 9                |                                    |   |   |                  |                             |

AC-Nr. 4 394 062

800 113,0-119,0 820 600 102,0-108,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 064

875 161,0-165,0 890 600 140,0-144,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 066

800 125,0-131,0 820 600 134,0-140,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 068

1025 192,0-198,0 1045 900 180,0-186,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 070

1000 200,0-206,0 1020 800 180,0-186,0 100 130,0-170,0 300 19,0-25,0  
600 189,0-195,0

AC-Nr. 4 394 072

940 185,0-195,0 955-65 - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 074

1025 230,0-236,0 1040 900 207,0-213,0 100 130,0-170,0 300 19,0-25,0  
700 209,0-215,0

AC-Nr. 4 394 076

1000 227,0-233,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 078

1000 235,0-241,0 1020 700 263,0-269,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 080

1000 220,0-226,0 1020 800 209,0-215,0 100 130,0-170,0 300 19,0-25,0  
600 227,0-233,0

AC-Nr. 4 394 082

910 190,0 930 - - 100 130,0-170,0 300 25,0

AC-Nr. 4 394 084

900 160,0-166,0 920 700 139,0-145,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 086

600 124,0-130,0 620 - - 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 088

700 127,0-133,0 720 600 124,0-130,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 090

800 139,0-145,0 820 600 124,0-130,0 100 130,0-170,0 300 19,0-25,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |   |                  |   |                  |                  |                             |
|---|------------------|---------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Full-load delivery ②<br>Control-rod stop<br>Test oil temp. 40°C (104°F) |                  | Starting fuel delivery ⑥<br>Idle<br>switching point |                  | Low idle speed ⑤ |                             |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                     | 1   | 2                | 6   | 7                | 8                | 9                           |

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AC-Nr. 4 394 092

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 157,0-163,0 | 945 | 800 | 145,0-151,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|     |             |     | 600 | 134,0-140,0 |     |             |     |           |

AC-Nr. 4 394 094

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 | 800 | 154,0-160,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 142,0-148,0 |     |             |     |           |

AC-Nr. 4 394 096

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 | 900 | 161,0-175,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 800 | 147,0-153,0 |     |             |     |           |

AC-Nr. 4 394 098

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 | 700 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 100

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 | 700 | 184,0-190,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 102

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 | 700 | 209,0-215,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 104

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 185,0-191,0 | 770 | 600 | 222,0-228,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 106

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 210,0-218,0 | 820 | 600 | 223,0-229,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 108

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 222,0-228,0 | 1070 | 900 | 202,0-208,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 207,0-213,0 |     |             |     |           |

AC-Nr. 4 394 110

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 240,0-246,0 | 1020 | 800 | 224,0-230,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 237,0-243,0 |     |             |     |           |

AC-Nr. 4 394 112

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 245,0-251,0 | 1070 | 900 | 224,0-230,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 237,0-243,0 |     |             |     |           |

AC-Nr. 4 394 114

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 217,0-223,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 219,0-225,0 |     |             |     |           |

AC-Nr. 4 394 116

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 210,0-216,0 | 920 | 700 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 118

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 | 900 | 281,0-287,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

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## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway<br>intermediate speed ②b | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Starting fuel delivery<br>Idle<br>switching point ⑥ |                  | Low idle speed ⑤ |                             |
|---|------------------|------------------------------------|---|------------------|---|------------------|------------------|-----------------------------|
| rev/min   | cm³/1000 strokes | rev/min                            | rev/min   | cm³/1000 strokes | rev/min   | cm³/1000 strokes | rev/min          | Control rod<br>travel<br>mm |
| 1   | 2                | 3                                  | 1   | 2                | 6   | 7                | 8                | 9                           |

AC-Nr. 4 394 120

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 | 900 | 246,0-252,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 268,0-274,0 |     |             |     |           |

AC-Nr. 4 394 122

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 279,0-285,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 289,0-295,0 |     |             |     |           |

AC-Nr. 4 394 124

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 | 900 | 265,0-271,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 268,0-274,0 |     |             |     |           |

AC-Nr. 4 394 126

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 232,0-238,0 | 920 | 700 | 253,0-259,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 128

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 750 | 244,0-250,0 | 770 | 700 | 253,0-259,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 130

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 800 | 239,0-245,0 | 820 | 600 | 248,0-254,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 132

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 212,0-218,0 | 1020 | 800 | 230,0-236,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 134

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 288,0-294,0 | 920 | 700 | 287,0-293,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 136

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 255,0-261,0 | 1020 | 800 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 270,0-276,0 |     |             |     |           |

AC-Nr. 4 394 138

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 239,0-245,0 | 1070 | 900 | 233,0-239,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 273,0-279,0 |     |             |     |           |

AC-Nr. 4 394 140

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1000 | 215,0-221,0 | 1020 | 800 | 197,0-203,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 600 | 220,0-226,0 |     |             |     |           |

AC-Nr. 4 394 142

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 222,0-228,0 | 920 | 700 | 254,0-260,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 144

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 257,0-263,0 | 1070 | 750 | 272,0-278,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 148

|      |             |      |     |             |     |             |     |      |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|
| 1050 | 295,0-303,0 | 1075 | 900 | 309,0-315,0 | 100 | 130,0-170,0 | 300 | 25,0 |
|------|-------------|------|-----|-------------|-----|-------------|-----|------|

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                               |   |   |                               |   |                               |                    |                             |
|---|-------------------------------|---|---|-------------------------------|---|-------------------------------|--------------------|-----------------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Starting fuel delivery<br>Idle<br>switching point (6) |                               | Low idle speed (5) |                             |
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min   | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod<br>travel<br>mm |
| 1   | 2                             | 3   | 1   | 2                             | 6   | 7                             | 8                  | 9                           |

AC-Nr. 4 394 150

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 | 900 | 274,0-280,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 280,0-286,0 |     |             |     |           |

AC-Nr. 4 394 152

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 | 900 | 267,0-273,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 267,0-273,0 |     |             |     |           |

AC-Nr. 4 394 154

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 | 900 | 283,0-289,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 293,0-299,0 |     |             |     |           |

AC-Nr. 4 394 156

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 | 900 | 301,0-307,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 309,0-315,0 |     |             |     |           |

AC-Nr. 4 394 158  
4 394 157

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 | 900 | 252,0-258,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 160

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 | 900 | 230,0-235,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 260,0-266,0 |     |             |     |           |

AC-Nr. 4 394 162

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 | 700 | 172,0-178,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 164

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 | 800 | 162,0-168,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|     |             |     | 700 | 177,0-183,0 |     |             |     |           |

AC-Nr. 4 394 166

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 | 800 | 160,0-166,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 168

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 | 800 | 251,0-257,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|     |             |     | 700 | 269,0-275,0 |     |             |     |           |

AC-Nr. 4 394 170

|     |             |     |     |             |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 | 600 | 240,0-246,0 | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
|-----|-------------|-----|-----|-------------|-----|-------------|-----|-----------|

AC-Nr. 4 394 176

|      |             |      |     |             |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1070 | 900 | 212,0-218,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |      | 700 | 240,0-246,0 |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5) |                       |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|--------------------|-----------------------|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8                  | 9                     |

AC-Nr. 4 394 246

|      |             |           |     |             |     |             |     |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |     |           |
|      |             |           | 600 | 255,5-266,0 |     |             |     |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 250

|      |             |           |  |  |     |             |     |           |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 257

|     |       |  |  |  |     |             |     |      |
|-----|-------|--|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 314

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 331

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 241,0-247,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 265,0-271,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 332

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 268,0-274,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 274,0-280,0 |      |  |  |     |             |     |           |
| 700  | 280,0-286,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 347

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 269,0-275,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 281,0-287,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 348

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 234,0-240,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 246,0-252,0 |      |  |  |     |             |     |           |
| 700  | 268,0-274,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 349

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 350

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 279,0-285,0 |      |  |  |     |             |     |           |
| 700  | 289,0-295,0 |      |  |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |  |    |
|---|------------------|---|--|------------------|--|------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                  | mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8  | 9  |
|   |                  |   |  |                  |  |                  |  |    |

AC-Nr. 4 394 351

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 352

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 262,0-268,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 267,0-273,0 |      |  |  |     |             |     |           |
| 700  | 267,0-273,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 353

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 279,0-285,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 283,0-289,0 |      |  |  |     |             |     |           |
| 700  | 293,0-299,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 354

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 356

|      |       |      |  |  |     |             |     |           |
|------|-------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 246,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 240,0 |      |  |  |     |             |     |           |
| 700  | 267,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 386

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 390

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 428

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 473

|     |             |     |  |  |     |             |     |      |
|-----|-------------|-----|--|--|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 |  |  | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |  |  |     |             |     |      |

AC-Nr. 4 394 501

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 521

|      |             |      |  |  |     |             |     |      |
|------|-------------|------|--|--|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |  |  |     |             |     |      |

AC-Nr. 4 394 527

|     |       |     |  |  |     |             |     |           |
|-----|-------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |  |  |     |             |     |           |

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel mm |    |
|---|------------------|---|--|------------------|--|------------------|---|----|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                     | mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9  |

AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|---|--|------------------|--|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8                  | 9                     |

AC-Nr. 4 394 740/741

|      |             |           |
|------|-------------|-----------|
| 1020 | 213,0-226,0 | 1030-1040 |
| 915  | 208,0-218,0 |           |

AC-Nr. 4 394 744

|      |       |           |     |             |     |           |
|------|-------|-----------|-----|-------------|-----|-----------|
| 1050 | 250,0 | 1060-1080 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 256,0 |           |     |             |     |           |

AC-Nr. 4 394 745

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 950 | 208,0-214,0 | 990 | 100 | 130,0-170,0 | 300 | 21,0-27,0 |
| 750 | 196,0-202,0 |     |     |             |     |           |

AC-Nr. 4 394 746

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 875 | 161,0-165,0 | 890 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 140,0-144,0 |     |     |             |     |           |

AC-Nr. 4 394 771

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 113,0-119,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 102,0-108,0 |     |     |             |     |           |

AC-Nr. 4 394 773

|     |             |     |     |             |     |           |
|-----|-------------|-----|-----|-------------|-----|-----------|
| 800 | 125,0-131,0 | 820 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 134,0-140,0 |     |     |             |     |           |

AC-Nr. 4 394 775

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 192,0-198,0 | 1045 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 180,0-186,0 |      |     |             |     |           |

AC-Nr. 4 394 777

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 200,0-206,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 180,0-186,0 |      |     |             |     |           |
| 600  | 189,0-195,0 |      |     |             |     |           |

AC-Nr. 4 394 779

|     |             |        |     |             |     |           |
|-----|-------------|--------|-----|-------------|-----|-----------|
| 940 | 185,0-195,0 | 955-65 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|--------|-----|-------------|-----|-----------|

AC-Nr. 4 394 781

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1025 | 230,0-236,0 | 1040 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 207,0-213,0 |      |     |             |     |           |
| 700  | 209,0-215,0 |      |     |             |     |           |

AC-Nr. 4 394 783

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 227,0-233,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 197,0-203,0 |      |     |             |     |           |

AC-Nr. 4 394 785

|      |             |      |     |             |     |           |
|------|-------------|------|-----|-------------|-----|-----------|
| 1000 | 235,0-241,0 | 1020 | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700  | 263,0-269,0 |      |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |   |                       |
|---|------------------|---|--|------------------|--|------------------|---|-----------------------|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a)<br>rev/min (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b)<br>rev/min (5b)   cm³/1000 strokes (5b) |                  | Starting fuel delivery<br>idle switching point (6)<br>rev/min (6)   cm³/1000 strokes (6) |                  | Low idle speed (5)<br>rev/min (5)   Control rod travel mm (5) |                       |
| rev/min   | cm³/1000 strokes | rev/min   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min   | Control rod travel mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8   | 9                     |

AC-Nr. 4 394 787

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1000 | 220,0-226,0 | 1020 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 209,0-215,0 |      |  |  |     |             |     |           |
| 600  | 227,0-233,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 789

|     |       |     |  |  |     |             |     |      |
|-----|-------|-----|--|--|-----|-------------|-----|------|
| 910 | 190,0 | 930 |  |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------|-----|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 791

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 160,0-166,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 139,0-145,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 793

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 600 | 124,0-130,0 | 620 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 795

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 700 | 127,0-133,0 | 720 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 797

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 800 | 139,0-145,0 | 820 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 124,0-130,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 799

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 925 | 157,0-163,0 | 945 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 145,0-151,0 |     |  |  |     |             |     |           |
| 600 | 134,0-140,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 801

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1000 | 180,0-186,0 | 1020 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800  | 154,0-160,0 |      |  |  |     |             |     |           |
| 700  | 142,0-148,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 803

|      |             |      |  |  |     |             |     |           |
|------|-------------|------|--|--|-----|-------------|-----|-----------|
| 1050 | 207,0-213,0 | 1070 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 161,0-175,0 |      |  |  |     |             |     |           |
| 800  | 147,0-153,0 |      |  |  |     |             |     |           |

AC-Nr. 4 394 805

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 187,0-193,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 162,0-168,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 807

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 200,0-206,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 700 | 184,0-190,0 |     |  |  |     |             |     |           |

AC-Nr. 4 394 809

|     |             |     |  |  |     |             |     |           |
|-----|-------------|-----|--|--|-----|-------------|-----|-----------|
| 900 | 203,0-209,0 | 920 |  |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 209,0-215,0 |     |  |  |     |             |     |           |

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5) |                       |
|---|------------------|---|--|------------------|--|------------------|--------------------|-----------------------|
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min            | Control rod travel mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8                  | 9                     |

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AC-Nr. 4 394 811

750 185,0-191,0  
600 222,0-228,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0  
600 223,0-229,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0  
900 202,0-208,0  
700 207,0-213,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 817

1000 240,0-246,0  
800 224,0-230,0  
600 237,0-243,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 819

1050 245,0-251,0  
900 224,0-230,0  
700 237,0-243,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 821

1000 217,0-223,0  
800 197,0-203,0  
600 219,0-225,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 823

900 210,0-216,0  
700 212,0-218,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0  
900 281,0-287,0  
700 293,0-299,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 827

1050 234,0-240,0  
900 246,0-252,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 829

1050 262,0-268,0  
900 279,0-285,0  
700 289,0-295,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 831

1050 241,0-247,0  
900 265,0-271,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

# C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br>Control rod travel mm |   |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|---|---|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                     |   |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8   | 9 |

AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |   |  |                  |  |                  |  |    |
|---|------------------|---|--|------------------|--|------------------|--|----|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                  | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                  | Starting fuel delivery<br>idle switching point (6) |                  | Low idle speed (5)<br>Control rod travel |    |
| rev/min   | cm³/1000 strokes | rev/min                                   | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                  | mm |
| 1   | 2                | 3   | 4  | 5                | 6  | 7                | 8  | 9  |

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AC-Nr. 4 394 861

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 296,0-302,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 301,0-307,0 |      |  |     |             |     |           |
| 700  | 309,0-315,0 |      |  |     |             |     |           |

AC-Nr. 4 394 863

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 253,0-256,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 252,0-258,0 |      |  |     |             |     |           |
| 700  | 269,0-275,0 |      |  |     |             |     |           |

AC-Nr. 4 394 865

|      |             |      |  |     |             |     |           |
|------|-------------|------|--|-----|-------------|-----|-----------|
| 1050 | 208,0-214,0 | 1070 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 230,0-236,0 |      |  |     |             |     |           |
| 700  | 260,0-266,0 |      |  |     |             |     |           |

AC-Nr. 4 394 867

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 181,0-187,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 172,0-178,0 |     |  |     |             |     |           |

AC-Nr. 4 394 869

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 176,0-182,0 | 945 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 162,0-168,0 |     |  |     |             |     |           |
| 700 | 177,0-183,0 |     |  |     |             |     |           |

AC-Nr. 4 394 871

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 173,0-179,0 | 920 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 160,0-166,0 |     |  |     |             |     |           |

AC-Nr. 4 394 873

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 925 | 237,0-243,0 | 945 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 800 | 251,0-257,0 |     |  |     |             |     |           |
| 700 | 269,0-275,0 |     |  |     |             |     |           |

AC-Nr. 4 394 875

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 700 | 218,0-224,0 | 720 |  | 100 | 130,0-170,0 | 300 | 27,0-33,0 |
| 600 | 240,0-246,0 |     |  |     |             |     |           |

AC-Nr. 4 394 877

|      |             |           |  |     |             |     |           |
|------|-------------|-----------|--|-----|-------------|-----|-----------|
| 1050 | 213,0-219,0 | 1060-1080 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 900  | 212,0-218,0 |           |  |     |             |     |           |
| 700  | 240,0-246,0 |           |  |     |             |     |           |

AC-Nr. 4 394 879

|      |             |           |     |             |     |             |           |
|------|-------------|-----------|-----|-------------|-----|-------------|-----------|
| 1050 | 211,0-220,0 | 1055-1075 | 975 | 237,5-247,0 | 100 | 130,0-170,0 | 19,0-25,0 |
|      |             |           | 700 | 258,5-269,5 |     |             |           |
|      |             |           | 600 | 255,5-266,0 |     |             |           |

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

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# C. Settings for Fuel Injection Pump with Fitted Governor

|   |                  |                                       |  |                  |  |                  |   |   |
|---|------------------|---------------------------------------|--|------------------|--|------------------|---|---|
| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) ② |                  | Breakaway ②b<br>intermediate speed ④a | Fuel delivery characteristics ⑤a<br>high idle speed ⑤b |                  | Starting fuel delivery<br>idle switching point ⑥ |                  | Low idle speed ⑤<br><br>Control rod travel mm |   |
| rev/min   | cm³/1000 strokes | rev/min                               | rev/min  | cm³/1000 strokes | rev/min  | cm³/1000 strokes | rev/min                                       |   |
| 1   | 2                | 3                                     | 4  | 5                | 6  | 7                | 8   | 9 |

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AC-Nr. 4 394 881

|     |       |     |  |     |             |     |           |
|-----|-------|-----|--|-----|-------------|-----|-----------|
| 700 | 246,0 | 720 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 600 | 263,0 |     |  |     |             |     |           |

AC-Nr. 4 394 883

|      |             |           |  |     |             |     |           |
|------|-------------|-----------|--|-----|-------------|-----|-----------|
| 1050 | 244,5-254,5 | 1060-1080 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 885

|     |       |  |  |     |             |     |      |
|-----|-------|--|--|-----|-------------|-----|------|
| 600 | 258,0 |  |  | 100 | 130,0-170,0 | 300 | 27,0 |
|-----|-------|--|--|-----|-------------|-----|------|

AC-Nr. 4 394 891

|     |             |     |  |     |             |     |      |
|-----|-------------|-----|--|-----|-------------|-----|------|
| 600 | 167,0-175,0 | 620 |  | 100 | 130,0-170,0 | 300 | 25,0 |
|-----|-------------|-----|--|-----|-------------|-----|------|

AC-Nr. 4 394 893

|     |             |     |  |     |             |     |           |
|-----|-------------|-----|--|-----|-------------|-----|-----------|
| 900 | 259,0-267,0 | 925 |  | 100 | 130,0-170,0 | 300 | 19,0-29,0 |
| 700 | 238,0-246,0 |     |  |     |             |     |           |

AC-Nr. 4 394 895

|      |             |      |  |     |             |     |      |
|------|-------------|------|--|-----|-------------|-----|------|
| 1000 | 188,0-196,0 | 1025 |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 800  | 180,0-187,0 |      |  |     |             |     |      |

AC-Nr. 4 394 897

|     |             |     |  |     |             |     |      |
|-----|-------------|-----|--|-----|-------------|-----|------|
| 850 | 189,0-197,0 | 875 |  | 100 | 130,0-170,0 | 325 | 30,0 |
| 750 | 185,0-193,0 |     |  |     |             |     |      |

AC-Nr. 4 394 899

|     |       |     |  |     |             |     |           |
|-----|-------|-----|--|-----|-------------|-----|-----------|
| 900 | 175,0 | 925 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 700 | 158,0 |     |  |     |             |     |           |

AC-Nr. 4 394 905

|      |             |      |  |     |             |     |      |
|------|-------------|------|--|-----|-------------|-----|------|
| 1000 | 239,0-247,0 | 1025 |  | 100 | 130,0-170,0 | 300 | 25,0 |
| 700  | 229,0-235,0 |      |  |     |             |     |      |

AC-Nr. 4 394 907

|     |       |     |  |     |             |     |           |
|-----|-------|-----|--|-----|-------------|-----|-----------|
| 900 | 161,0 | 925 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
| 800 | 151,0 |     |  |     |             |     |           |

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

|      |             |           |  |     |             |     |           |
|------|-------------|-----------|--|-----|-------------|-----|-----------|
| 1050 | 202,0-210,5 | 1060-1080 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 911

|      |             |           |  |     |             |     |           |
|------|-------------|-----------|--|-----|-------------|-----|-----------|
| 1000 | 230,5-239,5 | 1010-1030 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|-----|-------------|-----|-----------|

AC-Nr. 4 394 915

|      |             |           |  |     |             |     |           |
|------|-------------|-----------|--|-----|-------------|-----|-----------|
| 1000 | 203,0-211,5 | 1010-1030 |  | 100 | 130,0-170,0 | 300 | 19,0-25,0 |
|------|-------------|-----------|--|-----|-------------|-----|-----------|

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## C. Settings for Fuel Injection Pump with Fitted Governor

| Full-load delivery<br>Control-rod stop<br>Test oil temp. 40°C (104°F) (2) |                               | Breakaway (2b)<br>intermediate speed (4a) | Fuel delivery characteristics (5a)<br>high idle speed (5b) |                               | Starting fuel delivery<br>idle switching point (6) |                               | Low idle speed (5)<br>Control rod travel mm |   |
|---|-------------------------------|---|--|-------------------------------|--|-------------------------------|---|---|
| rev/min   | cm <sup>3</sup> /1000 strokes | rev/min                                   | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min  | cm <sup>3</sup> /1000 strokes | rev/min                                     |   |
| 1   | 2                             | 3   | 4  | 5                             | 6  | 7                             | 8   | 9 |

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AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0